

2 PRIEDAS. PAV atrankos išvados 2020 m. bei 2021 m.

**APLINKOS APSAUGOS AGENTŪRA**

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Nr. S-2020-104

UAB „Infraplanas“

UAB „Vėjo nauda“

Adresatams pagal sąrašą

**ATRANKOS IŠVADA DĖL KETURIŲ VĖJO ELEKTRINIŲ (KAD. NR. 8435/0004:145,
8435/0004:144 BRIDŽIŲ K., ŠAKIŲ SEN. IR KAD. NR. 8464/0003:324, 8464/0003:86
JURBŪDŽIŲ K., LUKŠIŲ SEN., ŠAKIŲ R. SAV.) STATYBOS IR EKSPLOATACIJOS
POVEIKIO APLINKAI VERTINIMO**

2020-

Nr. (30.2)-A4E-

1. Planuojamos ūkinės veiklos organizatorius (juridinio asmens pavadinimas, fizinis asmuo, adresas, tel.).

UAB „Vėjo nauda“, Briedžių g. 50, Bizierių k., LT-71473 Šakių r. Kontaktinis asmuo: Julius Lauraitis, mob. tel. (8-616) 75 112, jlauraitis3@gmail.com.

2. Poveikio aplinkai vertinimo dokumentų rengėjas (juridinio asmens pavadinimas, fizinis asmuo, adresas, tel.).

UAB „Infraplanas“, K. Donelaičio g. 55–2, Kaunas LT–44245, tel. Nr. (8 37) 40 75 48, faks. (8 37) 40 75 49, el. p. info@infraplanas.lt.

3. Planuojamos ūkinės veiklos atrankos dėl poveikio aplinkai vertinimo atlikimo teisinis pagrindas pagal Lietuvos Respublikos planuojamos ūkinės veiklos poveikio aplinkai vertinimo įstatymo 7 straipsnio 2 dalį, nurodant šio įstatymo 2 priedo punktą (-us).

Atranka atliekama, vadovaujantis Lietuvos Respublikos planuojamos ūkinės veiklos poveikio aplinkai vertinimo įstatymo (toliau – PAV įstatymas) 2 priedo 3.8. punkto 3.8.1. papunkčio nuostatomis, „įrengiamos 3 vėjo elektrinės, kurių bent vienos aukštis 50 m (matuojant iki aukščiausio konstrukcijų taško) ar daugiau“, bei 14 punkto nuostatomis, „Į Planuojamos ūkinės veiklos, kurios poveikis aplinkai privalo būti vertinamas, rūšių sąrašą ar į Planuojamos ūkinės veiklos, kuriai turi būti atliekama atranka dėl poveikio aplinkai vertinimo, rūšių sąrašą įrašytos planuojamos ūkinės veiklos bet koks keitimas ar išplėtimas, įskaitant esamų statinių rekonstravimą, gamybos proceso ir technologinės įrangos modernizavimą ar keitimą, gamybos būdo, produkcijos kiekio (masto) ar rūšies pakeitimą, naujų technologijų įdiegimą, kai planuojamos ūkinės veiklos keitimas ar išplėtimas gali daryti neigiamą poveikį aplinkai, išskyrus šio įstatymo 1 priedo 10 punkte nurodytus atvejus“.

4. Planuojamos ūkinės veiklos vieta.

Planuojama ūkinė veikla (toliau – PŪV) numatoma vykdyti keturiuose žemės sklypuose (kadastriniai Nr. 8464/0003:324, 8464/0003:86, 8435/0004:145, Nr. 8435/0004:144), kurie yra Šakių

rajone, Šakių bei Lukšių seniūnijose, Bridžių ir Jurbūdžių kaimuose. Žemės sklypų naudojimo paskirtis – kita, žemės sklypo naudojimo būdas – susisiekimo ir inžinerinių komunikacijų aptarnavimo objektų teritorijos.

PŪV gretimybėje UAB „Otada“ suplanavusi 12 vėjo elektrinių parką.

Artimiausia apgyvendinta teritorija - Bridžiai, nuo analizuojamų vėjo elektrinių, nutolę ~1,2 – 1,4 km atstumu vakarų kryptimi. Artimiausias gyvenamasis namas (Bridžių vs. 1, Lukšių sen., Šakių r. sav.), nuo planuojamos VE1 nutolęs 500 m atstumu pietvakarių kryptimi, nuo planuojamos VE2 artimiausias gyvenamasis pastatas (Plynių g. 1G, Plynių k., Lukšių sen., Šakių r.) nutolęs 943 m rytų kryptimi, nuo VE Nr. 3 ir Nr. 4 artimiausias gyvenamasis pastatas (Plynių g. 1G, Plynių k., Lukšių sen., Šakių r.) nutolęs atitinkamai 582 ir 888 metrų atstumu.

Artimiausia gydymo įstaiga – Šakių r. Išdagų medicinos punktas, nuo analizuojamo objekto teritorijos nutolusi apie 4,2 km vakarų kryptimi. Artimiausia ugdymo įstaiga – Šakių lopšelis-darželis „Berželis“, nuo analizuojamo objekto teritorijos nutolusi apie 5,6 km šiaurės vakarų kryptimi.

Vadovaujantis Šakių rajono savivaldybės teritorijos bendrojo plano pagrindinio brėžinio sprendiniais, planuojamos statyti vėjo elektrinės patenka į žemės ūkio teritorijas. Šiauriausiai esanti vėjo elektrinė patenka į gamtinį karkasą. Vadovaujantis Vietovės lygmens inžinerinės infrastruktūros vystymo plano Šakių rajono savivaldybėje sprendiniais, planuojamos statyti vėjo elektrinės patenka į teritorijas skirtas vėjo jėgainių statybai.

Artimiausioje analizuojamo objekto gretimybėje geotopų nėra aptinkama. Artimiausias geotopas nuo analizuojamos teritorijos nutolęs daugiau nei 18,1 km atstumu šiaurės rytų kryptimi (šaltinis Šventaduobis, Nr. 449).

Analizuojamoje teritorijoje ir artimiausioje gretimybėje geologiniai reiškiniai ir procesai nėra fiksuojami. Remiantis Valstybine geologijos informacine sistema (GEOLIS), artimiausias geologinis reiškinys užfiksuotas už daugiau nei 26,9 km šiaurės rytų kryptimi (nuošliaužų pažeistas šlaitas – Seredžiaus nuošliauža, Nr. 287 (Jurbarko r. sav., Seredžiaus sen., Seredžiaus mstl., Piliakalnio g.)).

Analizuojamoje teritorijoje ar greta jos naudingųjų iškasenų telkinių nėra. Artimiausias naudingųjų išteklių telkinys nuo planuojamų vėjo elektrinių nutolęs apie 5,1-5,9 km rytų kryptimi (Zyplių nenaudojamas molio telkinys Nr. 1801 (Šakių r. sav., Lukšių sen.)).

Vadovaujantis Lietuvos Respublikos saugomų teritorijų valstybės kadastro duomenimis, PŪV teritorija nepatenka į saugomų teritorijų tinklą. Artimiausia saugoma teritorija – Novos hidrografinis draustinis – nuo PŪV nutolęs apie 9,6-11,2 km atstumu pietvakarių kryptimi. Artimiausia Europos ekologinio tinklo „Natura 2000“ saugoma teritorija – Nemuno slėnio skroblynai nuo Kriukų iki Gelgaudiškio, (BAST), nuo PŪV yra nutolusi apie 15,5 km atstumu.

Pagal Nacionalinio kraštovaizdžio tvarkymo plano kraštovaizdžio vizualinio estetinio potencialo brėžinio sprendinius, analizuojama vietovė patenka į V0H3-d indeksais pažymėtą kraštovaizdžio vizualinės struktūros tipą. Šio vizualinio struktūros tipo kraštovaizdžiuose vyrauja neraiški vertikaloji sąskaida (lyguminis kraštovaizdis su vieno lygmens videotopais) su vyraujančių atvirų gerai apžvelgiamų erdvių kraštovaizdžiu. Kraštovaizdžio erdvinė struktūra be raiškių vertikalių ir horizontalių dominančių.

Vadovaujantis Lietuvos ornitologų draugijos su partneriais (Pajūrio tyrimų ir planavimo institutu ir Lietuvos energetikos institutu) nuo 2015 m. vasario iki 2017 kovo mėn. įgyvendinto projekto „Vėjo energetikos plėtra ir biologinei įvairovei svarbios teritorijos (VENBIS)“ duomenimis, PŪV vieta patenka į laibai ir mažai jautrias teritorijas paukščių atžvilgiu. Perinčių paukščių atžvilgiu dvi vėjo elektrinės patenka į mažai jautrias teritorijas, o likusios dvi vėjo elektrinės patenka į teritoriją, kurioje nepakanka duomenų jautrumui nustatyti. Migruojančių ir žiemojančių paukščių atžvilgiu PŪV vieta patenka į laibai ir mažai jautrias teritorijas. Šikšnosparnių atžvilgiu PŪV teritorija patenka į teritoriją, kurioje nepakanka duomenų jautrumui nustatyti.

Artimiausias vandens telkinys yra up. Pentutė, nuo PŪV nutolusi apie 0,1-1,9 km atstumu. Viena iš planuojamų vėjo jėgainių ribojasi su paviršinio vandens telkinio (up. Pentutė, Kad. Nr. 15010674) apsaugos zona, tačiau į ją nepatenka.

5. Trumpas planuojamos ūkinės veiklos aprašymas.

Numatoma statyti 4 vėjo elektrines (dviem iš jų išduoti statybą leidžiantys dokumentai, kadastriniai Nr. 8468/0003:324 bei 8468/0003:86) (nominali galia 2 MW, stiebo aukštis 78 m, rotoriaus diametras 82 m, skleidžiamas triukšmo lygis 103,5 dBA).

Vėjo jėgainių statyba apima gamyklose pagamintų konstrukcijų bei įrenginių parinktuose sklypuose sumontavimą, pamatų paruošimą ir visų reikalingų parengiamųjų darbų atlikimą. Vėjo jėgainių statybai planuojama naudoti metalines konstrukcijas, surenkamus gelžbetoninius/polinius pamatus ir kitą įrangą, kurie bus tiekiami jau pagaminti ir statybos vietoje vyks jų montavimas.

Numatoma, kad šalia orinės 35 kV linijos Sirvydai – Šakiai bus įrengtas uždaro tipo modulinis punktas, jame įrengiant keturis 35 kV narvelius. Visi elektros prisijungimo projektavimo darbai atlikti remiantis AB „Energijos skirstymo operatorius“ išduotomis prisijungimo sąlygomis. Projektuojama, jog požeminės elektros linijos trasa tęsis ~3 km, antžeminė dalis 0,660 km. Parinktos trasos bus suderintos su suinteresuotais juridiniais ir fiziniais asmenimis. Pro dujotiekio trasą numatoma pragražinti technologija, kabelį įgilinant iki 7 m gylio. Kasant tranšėją derlingas dirvožemio sluoksnis bus sandėliuojamas vienoje tranšėjos pusėje, nederlingas dirvožemio sluoksnis kitoje, užkasant kabelį pirma naudojamas nederlingas dirvožemio sluoksnis, o vėliau derlingas, siekiant nepabloginti dirvožemio derlingumo savybių, bei nepakenkti dirvodarinėms savybėms. Atvežtinis gruntas nebus naudojamas. Projektuojamai 35 kV kabelių linijai priartėjus prie esamų inžinerinių tinklų, tranšėja trasoje kasama rankiniu būdu. Nuo statomų vėjo elektrinių bus įrengiami nauji privažiavimo keliai, kurie jungsis į Plynių g., kuri sutapatinta su rajoniniu keliu Nr. 3814 Lukšiai – Sintautai.

Vėjo jėgainių statybos ir eksploatacijos metu cheminės medžiagos ir preparatai (mišiniai), įskaitant ir pavojingas chemines, radioaktyvias medžiagas, nenaudojamos.

Gamtos ištekliai, tokie kaip – vanduo, žemė, dirvožemis, biologinė įvairovė objekto statybos ir eksploatacijos metu nenaudojami. Vėjo jėgainių statybos ir eksploatacijos metu cheminės taršos (oro, dirvožemio, vandens teršalų, nuosėdų susidarymas) nesusidarys.

Vėjo jėgainių eksploatacijos metu atliekų susidarymas nenumatomas. Nedideli kiekiai metalo ir mišrių statybinių atliekų gali susidaryti numatomų vėjo elektrinių įrengimo – statybos metu, pamatų statybos darbų metu. Šios atliekos bus komplektuojamos į specialius konteinerius ir pagal sutartis su atliekų tvarkytojais išvežamos tolimesniam tvarkymui. Visos susidariusios atliekos tvarkomos vadovaujantis atliekų tvarkymą reglamentuojančių teisės aktų nuostatomis.

Vykdamas vėjo jėgainių eksploatacijos metu vanduo nenaudojamas, gamybinių nuotekų nesusidarys. Paviršinės (lietaus ir sniego tirpsmo) nuotekos nuo vėjo jėgainių aptarnavimo aikštelių nebus užterštos ir jas numatoma nuvesti į šalia esančią pievą natūraliai infiltruoti į gruntą.

Triukšmo modeliavimas atliktas kompiuterine programa CADNA A 4.0. Skaičiavimuose įvertintas statinių aukštingumas, reljefas, meteorologinės sąlygos, vietovės triukšmo absorbcinės savybės. Atliktuose triukšmo sklaidos skaičiavimuose buvo įvertintas artimiausioje gyvenamojoje aplinkoje PŪV keliamas triukšmas ir atskirai įvertintas suminis PŪV ir gretimybėje suplanuotų 12 vėjo elektrinių parko keliamas triukšmas. Atsižvelgiant į atliktus triukšmo sklaidos skaičiavimus vėjo elektrinių keliamas triukšmas artimiausioje gyvenamojoje aplinkoje sieks <35 dBA visais paros periodais, ir neviršija Lietuvos higienos normoje HN 33:2011 „Triukšmo ribiniai dydžiai gyvenamuosiuose ir visuomeninės paskirties pastatuose bei jų aplinkoje“, patvirtintoje Lietuvos Respublikos sveikatos apsaugos ministro 2011 m. birželio 13 d. įsakymu Nr. V-604 „Dėl Lietuvos higienos normos HN 33:2011 „Triukšmo ribiniai dydžiai gyvenamuosiuose ir visuomeninės paskirties pastatuose bei jų aplinkoje“ patvirtinimo“ nustatytų ribinių verčių.

Šešėlių mirgėjimo skaičiavimai atlikti kompiuterine programa WindPRO 2.7, pagal blogiausią scenarijų - priimta sąlyga, kad dienos metu visada švies saulė, elektrinė suksis visą parą ištisus metus, skaičiavimai atlikti prie artimiausių gyvenamųjų pastatų, priimant jog visi namai yra „šiltnamio tipo“, nevertintas gyvenamųjų pastatų užstojimas želdiniais, negyvenamosios paskirties pastatais. Atlikti planuojamų vėjo elektrinių šešėlių mirgėjimo skaičiavimai/modeliavimai parodė, jog artimiausiose sodybose šešėliavimas sieks 01:13 (h/metus) iki 09:14 (h/metus). Šešėlių poveikio mažinimui numatoma

sumontuoti šėšėliavimo stabdymo mechanizmą visoms keturioms analizuojamoms vėjo elektrinėms (shadow shut-down) ir šėšėliavimo mažinimo kompiuterinę programą, kuri bus integruota į vėjo jėgainių kontrolės sistemą.

Numatomų vėjo elektrinių statybų metu bus daromas trumpalaikis poveikis dirvožemiui. Nukastas derlingas dirvožemio sluoksnis bus panaudojamas statybos darbų pažeistų teritorijų rekultivacijai.

6. Priemonės numatomam reikšmingam neigiamam poveikiui aplinkai išvengti arba užkirsti jam kelią ir jų įgyvendinimo grafikas.

6.1. Numatomų statybų metu bus daromas trumpalaikis poveikis dirvožemiui. Nukastas derlingas dirvožemio sluoksnis bus panaudojamas statybos darbų pažeistų teritorijų rekultivacijai.

6.2. Statybos darbus numatyta vykdyti šviesiuoju paros metu.

6.3. Statybos ir eksploatacijos laikotarpiu numatoma parengti paukščių ir šikšnosparnių monitoringo programą, kuri bus suderinta su Aplinkos apsaugos agentūra.

6.4. Statybos darbų metu ir kasant kabelio prisijungimui skirtą tranšėją technika judės viena kryptimi iš anksto nužymėta ir tam parinkta judėjimo trajektorija, vengiant dirvos suardymo, suslėgimo ar kito neigiamo pašalinio poveikio aplinkinėms teritorijoms. Kasant tranšėją derlingas dirvožemio sluoksnis bus sandėliuojamas vienoje tranšėjos pusėje, nederlingas dirvožemio sluoksnis kitoje, užkasant kabelį pirma naudojamas nederlingas dirvožemio sluoksnis, o vėliau derlingas, siekiant nepabloginti dirvožemio derlingumo savybių, bei nepakenkti dirvodarinėms savybėms.

6.5. Šėšėlių poveikio mažinimui numatoma sumontuoti šėšėliavimo stabdymo mechanizmą visoms keturioms analizuojamoms vėjo elektrinėms (shadow shut-down) ir šėšėliavimo mažinimo kompiuterinę programą, kuri bus integruota į vėjo jėgainių kontrolės sistemą.

6.6. Saugiam vėjo elektrinių darbui yra numatyti vibracijos jutikliai, sraigto menčių patikra, apsauga nuo didelių sūkių, aerodinaminių stabdžių sistema, mechanine antiblokavimo sistema, sistema, sauganti nuo apledėjimo.

6.7. Vykdomos veiklos metu paaiškėjus, kad daromas didesnis poveikis aplinkai už atrankos informacijoje pateiktus arba teisės aktuose nustatytus rodiklius, veiklos vykdytojas privalės nedelsiant taikyti papildomas poveikį aplinkai mažinančias priemones arba mažinti veiklos apimtį/nutraukti veiklą.

6.8. Veiklos vykdytojas visais atvejais privalės laikytis visų aktualių veiklą reglamentuojančių teisės aktų reikalavimų, keičiantis teisiniam reglamentavimui atitinkamai keisti veiklos rodiklius.

7. Motyvai, kuriais remtasi priimant atrankos išvadą:

7.1. Vadovaujantis Lietuvos Respublikos saugomų teritorijų valstybės kadastro duomenimis, PŪV teritorija nepatenka į saugomų teritorijų tinklą. Artimiausia saugoma teritorija – Novos hidrografinis draustinis – nuo PŪV nutolęs apie 9,6-11,2 km atstumu pietvakarių kryptimi. Artimiausia Europos ekologinio tinklo „Natura 2000“ saugoma teritorija – Nemuno slėnio skroblynai nuo Kriukų iki Gelgaudiškio, (BAST), nuo PŪV yra nutolusi apie 15,5 km atstumu.

7.2. Vadovaujantis Šakių rajono savivaldybės teritorijos bendrojo plano pagrindiniu brėžiniu sprendiniais, planuojamos statyti vėjo elektrinės patenka į žemės ūkio teritorijas. Šiauriausiai esanti vėjo elektrinė patenka į gamtinį karkasą. Vadovaujantis Vietovės lygmens inžinerinės infrastruktūros vystymo plano Šakių rajono savivaldybėje sprendiniais, planuojamos statyti vėjo elektrinės patenka į teritorijas skirtas vėjo jėgainių statybai.

7.3. Pagal Nacionalinio kraštovaizdžio tvarkymo plano kraštovaizdžio vizualinio estetinio potencialo brėžinio sprendinius, analizuojama vietovė patenka į V0H3-d indeksais pažymėtą kraštovaizdžio vizualinės struktūros tipą. Šio vizualinio struktūros tipo kraštovaizdžiuose vyrauja neraiški vertikalioji sąskaida (lyguminis kraštovaizdis su vieno lygmens videotopais) su vyraujančių atvirų gerai apžvelgiamų erdvių kraštovaizdžiu. Kraštovaizdžio erdvinė struktūra be raiškių vertikalių ir horizontalių dominančių

7.4. Triukšmo modeliavimas atliktas kompiuterine programa CADNA A 4.0. Skaičiavimuose įvertintas statinių aukštingumas, reljefas, meteorologinės sąlygos, vietovės triukšmo absorbcinės savybės.

Atliktuose triukšmo sklaidos skaičiavimuose buvo įvertintas artimiausioje gyvenamojoje aplinkoje PŪV keliamas triukšmas ir atskirai įvertintas suminis PŪV ir gretimybėje suplanuotų 12 vėjo elektrinių parko keliamas triukšmas. Atsižvelgiant į atliktus triukšmo sklaidos skaičiavimus vėjo elektrinių keliamas triukšmas artimiausioje gyvenamojoje aplinkoje sieks <35 dBA visais paros periodais, ir neviršija Lietuvos higienos normoje HN 33:2011 „Triukšmo ribiniai dydžiai gyvenamuosiuose ir visuomeninės paskirties pastatuose bei jų aplinkoje“, patvirtintoje Lietuvos Respublikos sveikatos apsaugos ministro 2011 m. birželio 13 d. įsakymu Nr. V-604 „Dėl Lietuvos higienos normos HN 33:2011 „Triukšmo ribiniai dydžiai gyvenamuosiuose ir visuomeninės paskirties pastatuose bei jų aplinkoje“ patvirtinimo“ nustatytų ribinių verčių.

7.5. Šešėlių mirgėjimo skaičiavimai atlikti kompiuterine programa WindPRO 2.7, pagal blogiausią scenarijų - priimta sąlyga, kad dienos metu visada švies saulė, elektrinė suksis visą parą ištisus metus, skaičiavimai atlikti prie artimiausių gyvenamųjų pastatų, priimant jog visi namai yra „šiltnamio tipo“, nevertintas gyvenamųjų pastatų užstojimas želdiniais, negyvenamosios paskirties pastatais. Atlikti planuojamų vėjo elektrinių šešėlių mirgėjimo skaičiavimai/modeliavimai parodė, jog artimiausiose sodybose šešėliavimas sieks 01:13 (h/metus) iki 09:14 (h/metus). Šešėlių poveikio mažinimui numatoma sumontuoti šešėliavimo stabdymo mechanizmą visoms keturioms analizuojamoms vėjo elektrinėms (shadow shut-down) ir šešėliavimo mažinimo kompiuterinę programą, kuri bus integruota į vėjo jėgainių kontrolės sistemą.

7.6. Vėjo jėgainių eksploatacijos metu atliekų susidarymas nenumatomas. Nedideli kiekiai metalo ir mišrių statybinių atliekų gali susidaryti numatomų vėjo elektrinės įrengimo – statybos metu, pamatų statybos darbų metu. Šios atliekos bus komplektuojamos į specialius kontenerius ir pagal sutartis su atliekų tvarkytojais išvežamos tolimesniam tvarkymui. Visos susidariusios atliekos tvarkomos vadovaujantis atliekų tvarkymą reglamentuojančių teisės aktų nuostatomis.

7.7. Vėjo jėgainių statybos ir eksploatacijos metu cheminės taršos (oro, dirvožemio, vandens teršalų, nuosėdų susidarymas) nesusidarys.

7.8. Nacionalinio visuomenės sveikatos centro prie Sveikatos apsaugos ministerijos Marijampolės departamentas pagal Lietuvos Respublikos planuojamos ūkinės veiklos poveikio aplinkai vertinimo įstatymo (toliau – PAV įstatymas) 6 str. 5 d. 1 p., atsakingas už PŪV veiksmų, darančių įtaką visuomenės sveikatai, galimo poveikio visuomenės sveikatai vertinimą, 2020-08-25 raštu Nr. (4-06 14.3.5 E)2-57272 pateikė pasiūlymą, kad PŪV poveikio aplinkai vertinimas neprivalomas.

7.9. Priešgaisrinės apsaugos ir gelbėjimo departamento prie Vidaus reikalų ministerijos Kauno priešgaisrinės gelbėjimo valdyba pagal PAV įstatymo 6 str. 5 d. 3 p., atsakinga už PŪV vykdymo metu galimų įvykių, ekstremaliųjų įvykių, ekstremaliųjų situacijų, numatomų priemonių joms išvengti ar sušvelninti ir padariniams likviduoti, pasiūlymų informacijai atrankai, pagal kurią priimama ši atrankos išvada, bei pasiūlymų, kad PŪV reikalinga atlikti poveikio aplinkai vertinimą nepateikė.

7.10. Kultūros paveldo departamento prie Kultūros ministerijos Marijampolės skyrius pagal PAV įstatymo 6 str. 5 d. 2 p., atsakingas už galimą PŪV poveikį nekilnojamajam kultūros paveldui, 2020-09-14 raštu Nr. (12.53-M)2M-254, pateikė išvadą, kad pasiūlymų dėl atrankos informacijos ir PŪV poveikio aplinkai vertinimo neturi.

7.11. Šakių rajono savivaldybės administracija pagal PAV įstatymo 6 str. 5 d. 5 p., atsakinga už PŪV poveikio aplinkai vertinimo ir šios veiklos galimo poveikio aplinkai, atsižvelgiant į patvirtintų ir galiojančių teritorijų planavimo dokumentų sprendinius bei galimybes pagal teisės aktų reikalavimus juos keisti ir į pagal įstatymus vykdomo savivaldybės aplinkos stebėsenos (monitoringo) duomenis, pasiūlymų informacijai atrankai, pagal kurią priimama ši atrankos išvada, bei pasiūlymų, kad PŪV reikalinga atlikti poveikio aplinkai vertinimą nepateikė.

7.12. Aplinkos apsaugos agentūra pastabų ir pasiūlymų dėl PŪV poveikio aplinkai vertinimo, iš suinteresuotos visuomenės negavo.

8. Priimta atrankos išvada.

Atsižvelgiant į išdėstytus motyvus ir vadovaujantis PAV įstatymo 7 straipsnio 7 dalimi, priimama atrankos išvada: pagal pateiktą informaciją atrankai dėl UAB „Vėjo nauda“ PŪV – keturių vėjo elektrinių (Kad. Nr. 8435/0004:145, 8435/0004:144 Bridžių k., Šakių sen. ir Kad. Nr. 8464/0003:324, 8464/0003:86 Jurbūdžių k., Lukšių sen., Šakių r. sav.) statybos ir eksploatacijos – poveikio aplinkai vertinimas neprivalomas.

9. Nurodoma atrankos išvados apskundimo tvarka

Jūs turite teisę apskusti šį sprendimą Lietuvos administracinių ginčų komisijai (Vilniaus g. 27, 01402 Vilnius) Lietuvos Respublikos ikiteisminio administracinių ginčų nagrinėjimo tvarkos įstatymo nustatyta tvarka arba Vilniaus apygardos administraciniam teismui (Žygimantų g. 2, 01102 Vilnius) Lietuvos Respublikos administracinių bylų teisenos įstatymo nustatyta tvarka per vieną mėnesį nuo šio sprendimo įteikimo dienos.

Direktorius įgaliota direktoriaus pavaduotoja

Aldona Teresė Kučinskienė

**APLINKOS APSAUGOS AGENTŪROS 2020-
SĄRAŠAS**

RAŠTO NR. (30.2)-A4E- ADRESATŲ

Šakių rajono savivaldybės administracijai

Nacionalinio visuomenės sveikatos centro prie Sveikatos apsaugos ministerijos Marijampolės departamentui

Priešgaisrinės apsaugos ir gelbėjimo departamento prie Vidaus reikalų ministerijos Kauno priešgaisrinei gelbėjimo valdybai

Kultūros paveldo departamento prie Kultūros ministerijos Marijampolės skyriui

Kopija

Aplinkos apsaugos departamentui prie Aplinkos ministerijos

DETALŪS METADUOMENYS

Dokumento sudarytojas (-ai)	Aplinkos apsaugos agentūra, A. Juozapavičiaus g. 9, LT-09311 Vilnius
Dokumento pavadinimas (antraštė)	ATRANKOS IŠVADA DĖL KETURIŲ VĖJO ELEKTRINIŲ (KAD. NR. 8435/0004:145, 8435/0004:144 BRIDŽIŲ K., ŠAKIŲ SEN. IR KAD. NR. 8464/0003:324, 8464/0003:86 JURBŪDŽIŲ K., LUKŠIŲ SEN., ŠAKIŲ R. SAV.) STATYBOS IR EKSPLOATACIJOS POVEIKIO APLINKAI VERTINIMO
Dokumento registracijos data ir numeris	2020-10-07 Nr. (30.2)-A4E-8854
Dokumento specifikacijos identifikavimo žymuo	ADOC-V1.0, GEDOC
Parašo paskirtis	Pasirašymas
Parašą sukūrusio asmens vardas, pavardė ir pareigos	ALDONA TERESĖ KUČINSKIENĖ, Direktorius pavaduotoja
Parašo sukūrimo data ir laikas	2020-10-07 16:31:40
Parašo formatas	Parašas, pažymėtas laiko žyma
Laiko žymoje nurodytas laikas	2020-10-07 16:31:53
Informacija apie sertifikavimo paslaugų teikėją	ADIC CA-B
Sertifikato galiojimo laikas	2019-12-03 - 2022-12-02
Parašo paskirtis	Registravimas
Parašą sukūrusio asmens vardas, pavardė ir pareigos	Danguolė Petravičienė
Parašo sukūrimo data ir laikas	2020-10-07 16:46:15
Parašo formatas	Trumpalaikis skaitmeninis parašas, kuriame taip pat saugoma sertifikato informacija
Laiko žymoje nurodytas laikas	
Informacija apie sertifikavimo paslaugų teikėją	RCSC IssuingCA
Sertifikato galiojimo laikas	2020-01-09 - 2021-01-08
Pagrindinio dokumento priedų skaičius	0
Pagrindinio dokumento pridedamų dokumentų skaičius	0
Programinės įrangos, kuria naudojantis sudarytas elektroninis dokumentas, pavadinimas	Elektroninė dokumentų valdymo sistema VDVIS, versija v. 3.04.02
El. dokumento įvykius aprašantys metaduomenys	
Informacija apie elektroninio dokumento ir elektroninio (-ių) parašo (-ų) tikrinimą (tikrinimo data)	El. dokumentas atitinka specifikacijos keliamus reikalavimus. Visi dokumente esantys elektroniniai parašai galioja. Tikrinimo data: 2020-10-08 10:54:02
Elektroninio dokumento nuorašo atspausdinimo data ir ją atspausdinęs darbuotojas	2020-10-08 atspausdino Dovilė Petraškaitė
Paieškos nuoroda	

**APLINKOS APSAUGOS AGENTŪRA**

Biudžetinė įstaiga, A. Juozapavičiaus g. 9, LT-09311 Vilnius, tel. 8 706 62 008, el.p. aaa@aaa.am.lt, <http://gamta.lt>.
Duomenys kaupiami ir saugomi Juridinių asmenų registre, kodas 188784898

2021-07-28

Nr. S-2021-80

UAB „Infraplanas“
El. p. info@infraplanas.lt

UAB „Vėjo nauda“
El. p. jlauraitis3@gmail.com

Adresatams pagal sąrašą

**ATRANKOS IŠVADA DĖL DVIEJŲ VĖJO ELEKTRINIŲ (KAD. NR. 8435/0004:143 BRIDŽIŲ
K. BEI 8464/0003:131 BRIDŽIŲ VS., ŠAKIŲ SEN., ŠAKIŲ R. SAV.) STATYBOS IR
EKSPLOATACIJOS POVEIKIO APLINKAI VERTINIMO**

2021-

Nr. (30.2)-A4E-

1. Planuojamos ūkinės veiklos organizatorius (juridinio asmens pavadinimas, fizinis asmuo, adresas, tel.).

UAB „Vėjo nauda“, Briedžių g. 50, Bizierių k., LT-71473 Šakių r. Kontaktinis asmuo: Julius Lauraitis, tel. Nr. (8-616) 75 112, el. p. jlauraitis3@gmail.com.

2. Poveikio aplinkai vertinimo dokumentų rengėjas (juridinio asmens pavadinimas, fizinis asmuo, adresas, tel.).

UAB „Infraplanas“, K. Donelaičio g. 55–2, Kaunas LT–44245, tel. Nr. (8 37) 40 75 48, faks. (8 37) 40 75 49, el. p. info@infraplanas.lt.

3. Planuojamos ūkinės veiklos atrankos dėl poveikio aplinkai vertinimo atlikimo teisinis pagrindas pagal Lietuvos Respublikos planuojamos ūkinės veiklos poveikio aplinkai vertinimo įstatymo 7 straipsnio 2 dalį, nurodant šio įstatymo 2 priedo punktą (-us).

Atranka atliekama, vadovaujantis Lietuvos Respublikos planuojamos ūkinės veiklos poveikio aplinkai vertinimo įstatymo (toliau – PAV įstatymas) 2 priedo 3.8. punkto 3.8.1 papunkčiu – kai įrengiamos 3 vėjo elektrinės, kurių bent vienos aukštis 50 m (matuojant iki aukščiausio konstrukcijų taško) ar daugiau. Taip pat pagal PAV įstatymo 2 priedo 14 punkto nuostatas, kai į Planuojamos ūkinės veiklos, kurios poveikis aplinkai privalo būti vertinamas, rūšių sąrašą ar į Planuojamos ūkinės veiklos, kuriai turi būti atliekama atranka dėl poveikio aplinkai vertinimo, rūšių sąrašą įrašytos planuojamos ūkinės veiklos bet koks keitimas ar išplėtimas, įskaitant esamų statinių rekonstravimą, gamybos proceso ir technologinės įrangos modernizavimą ar keitimą, gamybos būdo, produkcijos kiekio (masto) ar rūšies pakeitimą, naujų technologijų įdiegimą, kai planuojamos ūkinės veiklos keitimas ar išplėtimas gali daryti neigiamą poveikį aplinkai, išskyrus šio įstatymo 1 priedo 10 punkte nurodytus atvejus.

4. Planuojamos ūkinės veiklos vieta.

Planuojama ūkinė veikla (toliau – PŪV) numatoma žemės sklypuose (kadastriniai Nr. 8435/0004:143, 8464/0003:131) Bridžių vs. ir Bridžių k., Šakių sen., Šakių r. sav. Žemės sklypų paskirtis žemės ūkio. Numatoma atidalinti žemės sklypus ir pakeisti jų paskirtį į kitą ir nustatyti žemės sklypo naudojimo būdą – susisiekimo ir inžinerinių komunikacijų aptarnavimo objektų teritorijos.

PŪV gretimybėje UAB „Otada“ suplanavusi 12 vėjo elektrinių parką

Artimiausia apgyvendinta teritorija - Bridžiai, nuo analizuojamų vėjo elektrinių, nutolę ~1,5 – 1,8 km atstumu vakarų kryptimi. Artimiausias gyvenamasis namas (Bridžių vs. 1, Lukšių sen., Šakių r. sav.), nuo planuojamos vėjo elektrinės Nr. NVE1 nutolęs 706 m atstumu pietvakarių kryptimi, nuo planuojamos vėjo elektrinės Nr. NVE2 artimiausias gyvenamasis namas (Plynių g. 1G, Plynių k., Lukšių sen., Šakių r.) nutolęs 535 m rytų kryptimi.

Artimiausia gydymo įstaiga – Šakių r. Išdagų medicinos punktas, nuo analizuojamo objekto teritorijos nutolusi apie 4,3 km vakarų kryptimi. Artimiausia ugdymo įstaiga – Šakių lopšelis-darželis „Berželis“, nuo analizuojamo objekto teritorijos nutolusi apie 5,4 km šiaurės vakarų kryptimi.

Vadovaujantis Šakių rajono savivaldybės teritorijos bendrojo plano pagrindinio brėžinio sprendiniais, planuojamos statyti vėjo elektrinės patenka į žemės ūkio teritorijas. Vadovaujantis Vietovės lygmens inžinerinės infrastruktūros vystymo plano Šakių rajono savivaldybėje sprendiniais, planuojamos statyti vėjo elektrinės patenka į teritorijas skirtas vėjo jėgainių statybai.

Artimiausioje analizuojamo objekto gretimybėje geotopų nėra aptinkama. Artimiausias geotopas nuo analizuojamos teritorijos nutolęs daugiau nei 18 km atstumu šiaurės rytų kryptimi (šaltinis Šventaduobis, Nr. 449).

Analizuojamoje teritorijoje ir artimiausioje gretimybėje geologiniai reiškiniai ir procesai nėra fiksuojami. Remiantis Valstybine geologijos informacine sistema (GEOLIS), artimiausias geologinis reiškinys užfiksuotas už daugiau nei 26,7 km šiaurės rytų kryptimi (nuošliaužų pažeistas šlaitas – Seredžiaus nuošliauža, Nr. 287 (Jurbarko r. sav., Seredžiaus sen., Seredžiaus mstl., Piliakalnio g.)).

Analizuojamoje teritorijoje ar greta jos naudingųjų iškasenų telkinių nėra. Artimiausias naudingųjų išteklių telkinys nuo planuojamų vėjo elektrinių nutolęs apie 5,1-5,9 km rytų kryptimi (Zyplių nenaudojamas molio telkinys Nr. 1801 (Šakių r. sav., Lukšių sen.)).

Vadovaujantis Lietuvos Respublikos saugomų teritorijų valstybės kadastro duomenimis, PŪV teritorija nepatenka į saugomų teritorijų tinklą. Artimiausia saugoma teritorija – Novos hidrografinis draustinis – nuo PŪV nutolęs apie 9,8-10,2 km atstumu pietvakarių kryptimi. Artimiausia Europos ekologinio tinklo „Natura 2000“ saugoma teritorija – Nemuno slėnio skroblynai nuo Kriukų iki Gelgaudiškio, (BAST), nuo PŪV yra nutolusi apie 16 km atstumu. PŪV nepatenka į kraštovaizdžio draustinių teritorijas, artimiausias Nykos kraštovaizdžio draustinis nuo PŪV nutolęs daugiau nei 15,4 km šiaurės rytų kryptimi.

Pagal Nacionalinio kraštovaizdžio tvarkymo plano kraštovaizdžio vizualinio estetinio potencialo brėžinio sprendinius, analizuojama vietovė patenka į V0H3-d indeksais pažymėtą kraštovaizdžio vizualinės struktūros tipą. Šio vizualinio struktūros tipo kraštovaizdžiuose vyrauja neraiški vertikali saskaida (lyguminis kraštovaizdis su vieno lygmens videotopais) su vyraujančių atvirų gerai apžvelgiamų erdvių kraštovaizdžiu. Kraštovaizdžio erdvinė struktūra be raiškių vertikalių ir horizontalių dominančių. Šis tipas nepriskiriamas prie vertingiausių estetiniu požiūriu struktūrų, vėjo elektrinių statybai apribojimai jame netaikomi.

Vadovaujantis Lietuvos ornitologų draugijos su partneriais (Pajūrio tyrimų ir planavimo institutu ir Lietuvos energetikos institutu) nuo 2015 m. vasario iki 2017 kovo mėn. įgyvendinto projekto „Vėjo energetikos plėtra ir biologinei įvairovei svarbios teritorijos (VENBIS)“ duomenimis, PŪV vieta patenka į mažai jautrias teritorijas, į teritoriją, kurioje nepakanka duomenų jautrumui nustatyti paukščių, perinčių paukščių, šikšnosparnių, migruojančių ir žiemojančių paukščių atžvilgiu.

Artimiausias vandens telkinys yra up. Pentutė, nuo PŪV nutolusi apie 0,3-1,9 km atstumu. Viena iš planuojamų vėjo jėgainių ribojasi su paviršinio vandens telkinio (up. Pentutė, Kad. Nr. 15010674) apsaugos zona, tačiau į ją nepatenka.

PŪV žemės sklypuose registruotų kultūros paveldo vertybių nėra. Artimiausia planuojamai teritorijai kultūros vertybė –1918 m. vasario 16-osios Lietuvos Nepriklausomybės Akto signataro Jono Vailokaičio ir kunigo, visuomenės veikėjo Juozo Vailokaičio gimtosios sodybos vieta – nuo PŪV teritorijos nutolęs apie 1,55 km atstumu.

5. Trumpas planuojamos ūkinės veiklos aprašymas.

Aplinkos apsaugos agentūra (toliau – Agentūra) 2020-10-07 raštu Nr. (30.2)-A4E-8854 priėmė atrankos išvadą, kad UAB „Vėjo nauda“ planuojamai ūkinei veiklai (toliau – PŪV) – keturių vėjo elektrinių (kad. Nr. 8435/0004:145, 8435/0004:144 Bridžių k., Šakių sen. ir kad. Nr. 8464/0003:324, 8464/0003:86 Jurbūdžių k., Lukšių sen., Šakių r. sav.) statybos ir eksploatacijos – poveikio aplinkai vertinimas neprivalomas. Naujos atrankos dėl poveikio aplinkai vertinimo procedūros atliekamos, nes PŪV organizatorius plečia veiklą, prie esamų 4 vėjo elektrinių planuojama papildomas dvi vėjo elektrines.

Numatoma statyti dvi vėjo elektrines (nominali galia iki 2 MW, stiebo aukštis iki 85 m, rotoriaus diametras iki 82 m, sklaidžiamas triukšmo lygis iki 103,5 dBA). Įgyvendinant projekto techninius sprendinius galimos analogiškų (arba mažesnių) parametrų vėjo elektrinių alternatyvos, kurios neviršytų įvertintų maksimalių parametrų ir jų poveikio masto.

Vėjo jėgainių statyba apima gamyklose pagamintų konstrukcijų bei įrenginių parinktuose žemės sklypuose sumontavimą, pamatų paruošimą ir visų reikalingų parengiamųjų darbų atlikimą. Vėjo jėgainių sklandžiai veiklai vykdyti yra sumontuotos saugumo (stabdymo sistema ir apsaugos nuo žaibavimo sistema) ir valdymo sistemos.

Anksčiau pastatytoms ir savo veiklą jau vykdančioms vėjo elektrinėms buvo įrengtas šalia orinės 35 kV linijos Sirvydai – Šakiai uždaro tipo modulinis punktas su 35 kV jame įrengiant keturis 35 kV narvelius. Visi elektros prisijungimo projektavimo darbai atlikti remiantis AB „Energijos skirstymo operatorius“ išduotomis prisijungimo sąlygomis. Projektuojama, jog požeminės elektros linijos trasa tęsis ~3 km, antžeminė dalis 0,660 km. Statant 35 kV oro linijos atramos vietą ir projektuojamą MT su savininku suderintoje vietoje, 35 kV oro linijos apsaugos zonoje. Parinktos trasos suderintos su suinteresuotais juridiniais ir fiziniiais asmenimis. Požeminė kabelinė linija bus tiesiama iškasant tranšėjas ir į jas paklojant kabelius. Tranšėjos kuriose bus klojamas kabelis yra privačiuose dirbamuose žemės ūkio sklypuose. Visi reikalingi planuojami atlikti darbai bus atliekami tik iš anksto suderinus su žemės sklypų savininkais. Numatoma, kad tranšėja bus kasama su ratiniu ekskavatoriumi. Technika judės viena kryptimi iš anksto nužymėta ir tam parinkta judėjimo trajektorija, vengiant dirvos suardymo, suslėgimo ar kito neigiamo pašalinio poveikio aplinkinėms teritorijoms. Kasant tranšėją derlingas dirvožemio sluoksnis bus sandėliuojamas vienoje tranšėjos pusėje, nederlingas dirvožemio sluoksnis kitoje, užkasant kabelį pirma naudojamas nederlingas dirvožemio sluoksnis, o vėliau derlingas, siekiant nepabloginti dirvožemio derlingumo savybių, bei nepakenkti dirvodarinėms savybėms. Atvežtinis gruntas nebus naudojamas. Projektuojamai 35 kV kabelių linijai priartėjus prie esamų inžinerinių tinklų, tranšėja trasoje kasama rankiniu būdu. Nuo statomų vėjo elektrinių bus įrengiami nauji privažiavimo keliai, kurie jungsis į Plynių g., kuri sutapatinta su rajoniniu keliu Nr. 3814 Lukšiai – Sintautai.

Vėjo jėgainių statybos ir eksploatacijos metu cheminės medžiagos ir preparatai (mišiniai), įskaitant ir pavojingas chemines, radioaktyvias medžiagas, nenaudojamos.

Gamtos ištekliai, tokie kaip – vanduo, žemė, dirvožemis objekto statybos ir eksploatacijos metu nenaudojami. Vėjo jėgainių statybos ir eksploatacijos metu cheminės taršos (oro, dirvožemio, vandens teršalų, nuosėdų susidarymas) nesusidarys.

Vėjo jėgainių eksploatacijos metu atliekų susidarymas nenumatomas. Nedideli kiekiai metalo ir mišrių statybinių atliekų gali susidaryti numatomų vėjo elektrinių įrengimo – statybos metu, pamatų statybos darbų metu. Šios atliekos bus talpinamos į specialius konteinerius ir pagal sutartis su atliekų tvarkytojais išvežamos tolimesniam tvarkymui. Visos susidariusios atliekos tvarkomos vadovaujantis atliekų tvarkymą reglamentuojančių teisės aktų nuostatomis.

Eksploatuojant vėjo elektrines vanduo nenaudojamas, gamybinių nuotekų nesusidarys. Paviršinės (lietaus ir sniego tirpsmo) nuotekos nuo vėjo jėgainių aptarnavimo aikštelių nebus užterštos ir jas numatoma nuvesti į šalia esančia pievas natūraliai infiltruoti į gruntą.

Triukšmo modeliavimas atliktas kompiuterine programa CADNA A 4.0. Skaičiavimuose įvertintas statinių aukštingumas, reljefas, meteorologinės sąlygos, vietovės triukšmo absorbcinės savybės. Atliktuose triukšmo sklaidos skaičiavimuose buvo įvertintas artimiausioje gyvenamojoje aplinkoje PŪV keliamas triukšmas ir atskirai įvertintas suminis PŪV ir gretimybėje suplanuotų 12 vėjo elektrinių parko keliamas triukšmas. Atsižvelgiant į atliktus triukšmo sklaidos skaičiavimus vėjo elektrinių keliamas triukšmas

artimiausioje gyvenamojoje aplinkoje pagal Enercon E82 modelį gali siekti nuo 35 dBA iki 35,5 dBA, pagal Enercon E66 ir Enercon E70 modelius gali siekti nuo 35 dBA iki 35,3 dBA, visais paros periodais, ir neviršija Lietuvos higienos normoje HN 33:2011 „Triukšmo ribiniai dydžiai gyvenamuosiuose ir visuomeninės paskirties pastatuose bei jų aplinkoje“, patvirtintoje Lietuvos Respublikos sveikatos apsaugos ministro 2011 m. birželio 13 d. įsakymu Nr. V-604 „Dėl Lietuvos higienos normos HN 33:2011 „Triukšmo ribiniai dydžiai gyvenamuosiuose ir visuomeninės paskirties pastatuose bei jų aplinkoje“ patvirtinimo“ nustatytų ribinių verčių. Pagal atliktus suminius triukšmo sklaidos modeliavimo rezultatus nustatyta, kad vėjo elektrinių sukeliamas triukšmo lygis gyvenamoje aplinkoje gali siekti nuo 35–36,7 dBA.

Šešėlių mirgėjimo skaičiavimai atlikti kompiuterine programa WindPRO. Atlikti planuojamų vėjo elektrinių šešėlių mirgėjimo skaičiavimai/modeliavimai parodė, jog artimiausiose sodybose šešėliavimas sieks 00:00 (h/metus) iki 11:01 (h/metus). Šešėlių poveikio mažinimui numatoma sumontuoti šešėliavimo stabdymo mechanizmą (shadow shut-down) ir šešėliavimo mažinimo kompiuterinę programą, kuri bus integruota į vėjo jėgainių kontrolės sistemą, ji vėjo elektrines stabdys tuo metu kada bus didžiausia šešėlių tikimybė.

Numatomų vėjo elektrinių statybų metu bus daromas trumpalaikis poveikis dirvožemiui. Nukastas derlingas dirvožemio sluoksnis bus panaudojamas statybos darbų pažeistų teritorijų rekultivacijai.

6. Priemonės numatomam reikšmingam neigiamam poveikiui aplinkai išvengti arba užkirsti jam kelią ir jų įgyvendinimo grafikas.

6.1. Numatomų statybų metu bus daromas trumpalaikis poveikis dirvožemiui. Nukastas derlingas dirvožemio sluoksnis bus panaudojamas statybos darbų pažeistų teritorijų rekultivacijai.

6.2. Statybos darbus numatyta vykdyti šviesiuoju paros metu.

6.3. Iki vėjo elektrinių statybos pradžios su Aplinkos apsaugos agentūra bus suderinta paukščių ir šikšnosparnių monitoringo programa.

6.4. Statybos darbų metu ir kasant kabelio prisijungimui skirtą tranšėją technika judės viena kryptimi iš anksto nužymėta ir tam parinkta judėjimo trajektorija, vengiant dirvos suardymo, suslėgimo ar kito neigiamo pašalinio poveikio aplinkinėms teritorijoms. Kasant tranšėją derlingas dirvožemio sluoksnis bus sandėliuojamas vienoje tranšėjos pusėje, nederlingas dirvožemio sluoksnis kitoje, užkasant kabelį pirma naudojamas nederlingas dirvožemio sluoksnis, o vėliau derlingas, siekiant nepabloginti dirvožemio derlingumo savybių, bei nepakenkti dirvodarinėms savybėms.

6.5. Šešėlių mirgėjimo poveikio mažinimui artimiausioms gyvenamosioms sodyboms, numatomas šešėliavimo stabdymo mechanizmas (shadow shut-down) ir šešėliavimo mažinimo kompiuterinė programa, kuri bus integruota į vėjo jėgainės kontrolės sistemą.

6.6. Vėjo elektrinių eksploatacijos laikotarpiu saugiam vėjo elektrinių darbui yra numatyti vibracijos jutikliai, sraigto menčių patikra, apsauga nuo didelių sūkių, aerodinaminių stabdžių sistema, mechanine antiblokavimo sistema, sistema, sauganti nuo apledėjimo.

6.7. Vykdomos veiklos metu paaiškėjus, kad daromas didesnis poveikis aplinkai už atrankos informacijoje pateiktus arba teisės aktuose nustatytus rodiklius, veiklos vykdytojas privalės nedelsiant taikyti papildomas poveikį aplinkai mažinančias priemones arba mažinti veiklos apimtį/nutraukti veiklą.

6.8. Veiklos vykdytojas visais atvejais privalės laikytis visų aktualių veiklą reglamentuojančių teisės aktų reikalavimų, keičiantis teisiniam reglamentavimui atitinkamai keisti veiklos rodiklius.

7. Motyvai, kuriais remtasi priimant atrankos išvadą:

7.1. Vadovaujantis Lietuvos Respublikos saugomų teritorijų valstybės kadastro duomenimis, PŪV teritorija nepatenka į saugomų teritorijų tinklą. Artimiausia saugoma teritorija – Novos hidrografinis draustinis – nuo PŪV nutolęs apie 9,8-10,2 km atstumu pietvakarių kryptimi. Artimiausia Europos ekologinio tinklo „Natura 2000“ saugoma teritorija – Nemuno slėnio skroblynai nuo Kriukų iki Gelgaudiškio, (BAST), nuo PŪV yra nutolusi apie 15,4 km atstumu.

7.2. Vadovaujantis Šakių rajono savivaldybės teritorijos bendrojo plano pagrindiniu brėžiniu sprendiniais, planuojamos statyti vėjo elektrinės patenka į žemės ūkio teritorijas. Vadovaujantis Vietovės lygmens inžinerinės infrastruktūros vystymo plano Šakių rajono savivaldybėje sprendiniais, planuojamos statyti vėjo elektrinės patenka į teritorijas skirtas vėjo jėgainių statybai.

7.3. Pagal Nacionalinio kraštovaizdžio tvarkymo plano kraštovaizdžio vizualinio estetinio potencialo brėžinio sprendinius, analizuojama vietovė patenka į V0H3-d indeksais pažymėtą kraštovaizdžio vizualinės struktūros tipą. Šio vizualinio struktūros tipo kraštovaizdžiuose vyrauja neraiški vertikalioji sąskaida (lyguminis kraštovaizdis su vieno lygmens videotopais) su vyraujančių atvirų gerai apžvelgiamų erdvių kraštovaizdžiu. Kraštovaizdžio erdvinė struktūra be raiškių vertikalių ir horizontalių dominančių. Šis tipas nepriskiriamas prie vertingiausių estetiniu požiūriu struktūrų, vėjo elektrinių statybai apribojimai jame netaikomi.

7.4. Triukšmo modeliavimas atliktas kompiuterine programa CADNA A 4.0. Skaičiavimuose įvertintas statinių aukštingumas, reljefas, meteorologinės sąlygos, vietovės triukšmo absorbcinės savybės. Atliktuose triukšmo sklaidos skaičiavimuose buvo įvertintas artimiausioje gyvenamojoje aplinkoje PŪV keliamas triukšmas ir atskirai įvertintas suminis PŪV ir gretimybėje suplanuotų 12 vėjo elektrinių parko keliamas triukšmas. Atsižvelgiant į atliktus triukšmo sklaidos skaičiavimus vėjo elektrinių keliamas triukšmas artimiausioje gyvenamojoje aplinkoje pagal Enercon E82 modelį gali siekti nuo 35 dBA iki 35,5 dBA, pagal Enercon E66 ir Enercon E70 modelius gali siekti nuo 35 dBA iki 35,3 dBA, visais paros periodais, ir neviršija Lietuvos higienos normoje HN 33:2011 „Triukšmo ribiniai dydžiai gyvenamuosiuose ir visuomeninės paskirties pastatuose bei jų aplinkoje“, patvirtintoje Lietuvos Respublikos sveikatos apsaugos ministro 2011 m. birželio 13 d. įsakymu Nr. V-604 „Dėl Lietuvos higienos normos HN 33:2011 „Triukšmo ribiniai dydžiai gyvenamuosiuose ir visuomeninės paskirties pastatuose bei jų aplinkoje“ patvirtinimo“ nustatytų ribinių verčių. Pagal atliktus suminius triukšmo sklaidos modeliavimo rezultatus nustatyta, kad vėjo elektrinių sukiamas triukšmo lygis gyvenamoje aplinkoje gali siekti nuo 35–36,7 dB(A).

7.5. Šešėlių mirgėjimo skaičiavimai atlikti kompiuterine programa WindPRO. Atlikti planuojamų vėjo elektrinių šešėlių mirgėjimo skaičiavimai/modeliavimai parodė, jog artimiausiose sodybose šešėliavimas sieks 00:00 (h/metus) iki 11:01 (h/metus). Šešėlių poveikio mažinimui numatoma sumontuoti šešėliavimo stabdymo mechanizmą (shadow shut-down) ir šešėliavimo mažinimo kompiuterinę programą, kuri bus integruota į vėjo jėgainių kontrolės sistemą, ji vėjo elektrines stabdys tuo metu kada bus didžiausia šešėlių tikimybė.

7.6. Vėjo jėgainių eksploatacijos metu atliekų susidarymas nenumatomas. Nedideli kiekiai metalo ir mišrių statybinių atliekų gali susidaryti numatomų vėjo elektrinės įrengimo – statybos metu, pamatų statybos darbų metu. Šios atliekos bus talpinamos į specialius konteinerius ir pagal sutartis su atliekų tvarkytojais išvežamos tolimesniam tvarkymui. Visos susidariusios atliekos tvarkomos vadovaujantis atliekų tvarkymą reglamentuojančių teisės aktų nuostatomis.

7.7. Vėjo jėgainių statybos ir eksploatacijos metu cheminės taršos (oro, dirvožemio, vandens teršalų, nuosėdų susidarymas) nesusidarys.

Poveikio aplinkai vertinimo subjektai: Nacionalinio visuomenės sveikatos centro prie Sveikatos apsaugos ministerijos Marijampolės departamentas pagal PAV įstatymo 6 str. 5 d. 1 p., atsakingas už PŪV veiksmų, darančių įtaką visuomenės sveikatai, galimo poveikio visuomenės sveikatai vertinimą, 2021-07-15 raštu Nr. (4-22 14.3.5 Mr)2-98452 pateikė išvadą, kad pasiūlymų atlikti PŪV poveikio aplinkai vertinimo procedūras neturi. Priešgaisrinės apsaugos ir gelbėjimo departamento prie Vidaus reikalų ministerijos Kauno priešgaisrinės gelbėjimo valdyba pagal PAV įstatymo 6 str. 5 d. 3 p., atsakinga už PŪV vykdymo metu galimų įvykių, ekstremaliųjų įvykių, ekstremaliųjų situacijų, numatomų priemonių joms išvengti ar sušvelninti ir padariniams likviduoti, pasiūlymų informacijai atrankai, pagal kurią priimama ši atrankos išvada, bei pasiūlymų, kad PŪV reikalinga atlikti poveikio aplinkai vertinimą nepateikė. Kultūros paveldo departamento prie Kultūros ministerijos Marijampolės skyrius pagal PAV įstatymo 6 str. 5 d. 2 p., atsakingas už galimą PŪV poveikį nekilnojamajam kultūros paveldui, 2021-05-19 raštu Nr. 2AM-516-(9.38-AM), pateikė išvadą, kad atrankos informacijai pasiūlymų neturi, PŪV kultūros paveldo apsaugai vertinimas nereikalingas. Šakių rajono savivaldybės administracija pagal PAV įstatymo 6 str. 5 d. 5 p., atsakinga už PŪV poveikio aplinkai vertinimo ir šios veiklos galimo poveikio aplinkai, atsižvelgiant į patvirtintų ir galiojančių teritorijų planavimo dokumentų sprendinius bei galimybes pagal teisės aktų reikalavimus juos keisti ir į pagal įstatymus vykdomo savivaldybės aplinkos stebėsenos (monitoringo)

duomenis, 2021-05-26 raštu Nr. S E-742 pateikė išvadą, kad pritaria atrankos informacijos turiniui ir pasiūlymų dėl pateikto dokumento neturi.

Aplinkos apsaugos agentūra pastabų ir pasiūlymų dėl PŪV poveikio aplinkai vertinimo, iš suinteresuotos visuomenės negavo.

8. Priimta atrankos išvada.

Atsižvelgiant į išdėstytus motyvus ir vadovaujantis PAV įstatymo 7 straipsnio 7 dalimi, priimama atrankos išvada: pagal pateiktą informaciją atrankai dėl UAB „Vėjo nauda“ PŪV – dviejų vėjo elektrinių (Kad. Nr. 8435/0004:143 Bridžių k. bei 8464/0003:131 Bridžių vs., Šakių sen., Šakių r. sav.) statybos ir eksploatacijos – poveikio aplinkai vertinimas neprivalomas.

9. Nurodoma atrankos išvados apskundimo tvarka

Jūs turite teisę apskusti šį sprendimą Lietuvos administracinių ginčų komisijai (Vilniaus g. 27, 01402 Vilnius) Lietuvos Respublikos ikiteisminio administracinių ginčų nagrinėjimo tvarkos įstatymo nustatyta tvarka arba Vilniaus apygardos administraciniam teismui (Žygimantų g. 2, 01102 Vilnius) Lietuvos Respublikos administracinių bylų teisenos įstatymo nustatyta tvarka per vieną mėnesį nuo šio sprendimo įteikimo dienos.

Direktorius pavaduotojas

Rikantas Aukškalis

APLINKOS APSAUGOS AGENTŪROS 2021- RAŠTO NR. (30.2)-A4E- ADRESATŲ SĄRAŠAS

Šakių rajono savivaldybės administracijai
Siunčiama per e. pristatymas sistemą

Nacionaliniam visuomenės sveikatos centrai prie Sveikatos apsaugos ministerijos
Siunčiama per e. pristatymas sistemą

Priešgaisrinės apsaugos ir gelbėjimo departamentui prie Vidaus reikalų ministerijos
Siunčiama per e. pristatymas sistemą

Kultūros paveldo departamentui prie Kultūros ministerijos
Siunčiama per e. pristatymas sistemą

Kopija
Aplinkos apsaugos departamentui prie Aplinkos ministerijos
Siunčiama per e. pristatymas sistemą

DETALŪS METADUOMENYS

Dokumento sudarytojas (-ai)	Aplinkos apsaugos agentūra, A. Juozapavičiaus g. 9, LT-09311 Vilnius
Dokumento pavadinimas (antraštė)	ATRANKOS IŠVADA DĖL DVIEJŲ VĖJO ELEKTRINIŲ (KAD. NR. 8435/0004:143 BRIDŽIŲ K. BEI 8464/0003:131 BRIDŽIŲ VS., ŠAKIŲ SEN., ŠAKIŲ R. SAV.) STATYBOS IR EKSPLOATACIJOS POVEIKIO APLINKAI VERTINIMO
Dokumento registracijos data ir numeris	2021-08-13 Nr. (30.2)-A4E-9449
Dokumento specifikacijos identifikavimo žymuo	ADOC-V1.0, GEDOC
Parašo paskirtis	Pasirašymas
Parašą sukūrusio asmens vardas, pavardė ir pareigos	RIKANTAS AUKŠKALNIS, Direktorius pavaduotojas
Parašo sukūrimo data ir laikas	2021-08-13 10:41:04
Parašo formatas	Parašas, pažymėtas laiko žyma
Laiko žymoje nurodytas laikas	2021-08-13 10:41:20
Informacija apie sertifikavimo paslaugų teikėją	ADIC CA-B
Sertifikato galiojimo laikas	2020-12-16 - 2023-12-16
Parašo paskirtis	Registravimas
Parašą sukūrusio asmens vardas, pavardė ir pareigos	Danguolė Petravičienė, Vyriausioji specialistė
Parašo sukūrimo data ir laikas	2021-08-13 11:30:37
Parašo formatas	Trumpalaikis skaitmeninis parašas, kuriame taip pat saugoma sertifikato informacija
Laiko žymoje nurodytas laikas	
Informacija apie sertifikavimo paslaugų teikėją	RCSC IssuingCA
Sertifikato galiojimo laikas	2021-01-07 - 2023-01-07
Pagrindinio dokumento priedų skaičius	0
Pagrindinio dokumento pridedamų dokumentų skaičius	0
Programinės įrangos, kuria naudojantis sudarytas elektroninis dokumentas, pavadinimas	Elektroninė dokumentų valdymo sistema VDVIS, versija v. 3.04.02
El. dokumento įvykius aprašantys metaduomenys	
Informacija apie elektroninio dokumento ir elektroninio (-ių) parašo (-ų) tikrinimą (tikrinimo data)	El. dokumentas atitinka specifikacijos keliamus reikalavimus. Visi dokumente esantys elektroniniai parašai galioja. Tikrinimo data: 2021-08-13 11:31:47
Elektroninio dokumento nuorašo atspausdinimo data ir ją atspausdinęs darbuotojas	2021-08-13 atspausdino Danguolė Petravičienė
Paieškos nuoroda	

6 PRIEDAS. Triukšmas



DIZAINAS



1 1 PAGRINDINIAI DUOMENYS

1.1 ENERCON E-66 / 18.70 techniniai duomenys

E-66 / 18.70 - tai vėjo energijos keitiklis su kintamu greičiu ir aktyvus mentės pakrypimas. Generatorius prijungiamas tiesiai prie stebulės.

1.1.1 Dizainas

Projektas "GL Wind" II klasei (Germanischer Lloyd "Richtlinie für die Kerträserung von Windkraftanlagen", paskelbtas 1998 m. Kovo mėn. "[Vėjo jėgainių turbinų sertifikavimo gairės]).

1.1.2 Veiklos duomenys

Nominali galia: 1800 kW *

Išėjimas (10 m / s): apytiksliai. 870 kW

Pjovimo vėjo greitis: 2,0 m / s

Vidinis vėjo greitis: 25 m / s Vidutinis vėjo greitis

specifikacija: 8,5 m / s

Nominalus vėjo greitis: 12,5 m / s

1.1.3 Generatorius su pavaros traukiniu

Generatorius: ENERCON žiedo generatorius (sinchroninis), tiesiogiai sujungtas su stebuliu

Greitis: kintamas; 8 -22,5 r / min

Guolis: 1 cilindrinis ritininis guolis / 1 dviejų serijos kūginis ritininis guolis

Centras: tvirtas

1.1.4 Rotoras

Rotoriaus skersmuo: 70 m

Rotoriaus plotas: 3848 m²

Ašmenys ilgis: 32,8 m

Ašmenų skaičius: 3

Profiliavimas: ENERCON

Rotoriaus tepalo svoris: apytiksliai. 4,0 t

Peilio medžiaga: GRP / epoksidinė derva

Greitis: kintamas; 8 -22,5 r / min

Ašies veleno greitis: 29 m / s - 82,5 m / s

Stabdymo sistemos: trys savipirkti ašmenų pakreipimo sistemos

Sukimosi kryptis: pagal laikrodžio rodyklę

Orientacija: véjuota

* Galima sumažinti galia

1.1.5 Papildomos keitiklio funkcijos

"Yaw Control": aktyvus per reguliavimo mechanizmą, slopinant per



trinties guolis

Tinklelio maitinimo šaltinis: ENERCON inverteriai su dideliu laikrodžiu ir sinusidine srove.

Stabdymo sistemos: - trys savidiaverčios pjovimo ašies sistemos su avarinis maitinimas

- rotoriaus stabdymo stabdys

- rotoriaus užraktas, 15 ° užrakinamas

1.1.6 Matmenys / svoris

Mišios, visos nacelle: apytiksl. 100,5 t

Mišios, nacelle: apytiksliai. 19,3 t (be rotoriaus, generatoriaus)

Masė, generatorius komplektas: apytiksl. 50,6 t

Masė, koncentratorius su ašmenimis: apytiksliai. 38,8 t

Bokšto aukštis: 59 m 63 m 84 m 97 m

Centro aukštis: 60 m 65 m 85 m 98 m

Bokšto masė: 105 t 134 t 214 t, 876 t

1.2 Esamos E-66 prieinamumas

1.2.1 prieinamumas 2000

Šie duomenys rodo, kad yra prieinami visi ENERCON E-66s, prijungti prie "Scada" sistemos.

Mėnuo Turbinų skaičius įvertinimui Prieinamumas *

Sausio 265 m. 97,5%

256 vasaris 97,7%

Kovo 26 d. 98,0%

Balandžio 268 98,6%

Gegužės 296 98,1%

Birželio 301 98,4%

Liepa 306 98,3%

Rugpjūtis 310 97,6%

Rugsėjis 321 97,8%

Spalio 324 97,7%

Lapkričio 328 98,1%

Gruodžio 328 98,2%

* priežiūra apskaičiuota taip, tarsi jos nėra

1.2.2 E-66 prieinamumas 2001 metais

Mėnuo E-66 / 1500kW Prieinamumas * E-66 / 1800kW Prieinamumas *

Sausio 356 98,12% 111 97,09%

Vasaris 359 98,40% 132 97,32%

Kovo 362 98,55% 149 97,88%

Balandžio 366 98,53% 171 98,06%

Gegužės 371 98,26% 198 97,25%

Birželio 371 98,38% 221 97,52%

Liepos 375 97,97% 247 97,74%

Rugpjūtis 375 97,85% 275 97,50%

Rugsėjis 375 98,21% 309 97,73%

Spalio 375 98,42% 340 97,74%



Lapkričio 375 98,10% 362 97,92%
Gruodžio 375 98,16% 375 98,24%
* priežiūra apskaičiuota taip, tarsi jos nėra

1.2.3. E-66 prieinamumas 2002 metais

Mėnuo E-66 / 1500kW Prieinamumas * E-66 / 1800kW Prieinamumas *

Sausis 375 97.85% 445 96.69%

Vasaris 375 98.10% 465 97.19%

Kovo 375 98.42% 510 97.99%

Balandžio 375 98.41% 542 97.83%

Gegužės 375 98.34% 570 98.27%

Birželis 375 97.81% 598 97.81%

Liepa 375 97.55% 637 98.30%

Rugpjūčio 375 97.43% 668 98.36%

Rugsėjis 375 97.60% 692 98.45%

Spalis 375 96.57% 709 98.44%

Lapkričio 375 97.09% 725 98.67%

Gruodžio 375 98.27% 738 98.70%

* priežiūra apskaičiuota taip, tarsi jos nėra

2 POWER CURVE

Žiūrėkite skyrių "Galios kreivė".

3

GARSO EMISIJOS

WEC:

ENERCON E-66 / 18.70 su

stebulės aukštis 65, 85 ir 98 m

Vėjo greitis: 8 m / s 10 m aukštyje 10 m / s 10 m aukštyje

Garso stiprumas greitis 65 m: 100,5 dB (A) 102,7 dB (A)

Garso stiprumas greitis 85 m:

Garso stiprumas prie centro aukščio 98 m: 100,8 dB (A) 102,7 dB (A)

101,0 dB (A) 102,7 dB (A)

Taip pat žiūrėkite skyrių "Garso galios lygis".

4 PAGRINDINIAI SERTIFIKATAI

Taip pat žiūrėkite skyriuje "Sertifikatai"

a) Vėjo jėgainių projektavimo įvertinimas



"Vėjo energijos konversijos sistemos projektavimo įvertinimo atitikties pareiškimas", vėjo energijos konverteris 00-005A-2000 E-66 / 18.70
Patvirtinta Germanischer Lloyd
Sertifikavimo data 31/03/2000

b) Garso lygis

Sertifikato apimtis Garso galios lygis E-66 / 18.70
Sertifikavimo įstaiga Windest Kaiser-Wilhelm-Koog GmbH
Sertifikavimo kodo matavimo ataskaita WT1809 / 01, data 2001.01.05
Sertifikato apimtis Garso galios lygis E-66 / 18.70
Sertifikavimo įstaiga "Kötter Consulting Engineers"
Sertifikavimo kodo matavimo ataskaita 25597-1.001 nuo 2001.07.20

c) Tinklelis suderinamumas

Elektrinių charakteristikų sertifikato matavimo apimtis, susijusi su E-66 / 18.70 komunalinių tinklų sujungimu
Sertifikavimo įstaiga WINDTEST, Kaiser-Wilhelm-Koog GmbH
Sertifikavimo kodas ataskaita Nr .: WT 2009/00, 2001.05.12

d) galios kreivė

E-66 / 18.70 sertifikato galios veikimo sritis
Sertifikavimo įstaiga DEWI (Deutsches Windenergie Institut)
Sertifikavimo kodo ataskaita: PV 0002-05-16, 2001.09.12

e) kokybė

Sertifikato apimtis ENERCON kokybės užtikrinimo sistema
Standartas ISO 9001 (rev. 08)

Enercon E-70 su 2,0 MW vardinės galios garso vertės					
Stiebo aukštis Vėjo greitis 10 m aukštyje	58 m	64 m	85 m	98/99 m	113 m
4 m/s	90.7 dB(A)	90.8 dB(A)	91.1 dB(A)	91.3 dB(A)	91.4 dB(A)
5 m/s	93.6 dB(A)	93.6 dB(A)	94.1 dB(A)	94.6 dB(A)	95.1 dB(A)
6 m/s	98.5 dB(A)	98.8 dB(A)	99.7 dB(A)	100.0 dB(A)	100.3 dB(A)
7 m/s	101.3 dB(A)	101.4 dB(A)	101.6 dB(A)	101.7 dB(A)	101.9 dB(A)
8 m/s	102.0 dB(A)	102.1 dB(A)	102.5 dB(A)	102.7 dB(A)	102.8 dB(A)
95% vardinės galios	103.0 dB(A)	103.0 dB(A)	103.0 dB(A)	104.5 dB(A)	104.5 dB(A)
10 m/s	103.0 dB(A)	103.0 dB(A)	103.0 dB(A)	104.5 dB(A)	104.5 dB(A)

1. Garantuojama 0–1 dB tonalumo vertė KTN visame veikimo diapazone (galiojanti šalia turbinos pagal IEC).
2. KIN impulsyvumo vertė 0 dB garantuojama visame veikimo diapazone (galioja netoli turbinos pagal IEC).
3. Lentelėje pateiktos garso galios vertės galioja II darbo režimui (apibrėžtam sukimosi greičio diapazone nuo 6 iki 21 aps / min). Atitinkama galios kreivė yra 2005 m. Gegužės mėn. Apskaičiuota galios kreivė (1.x red.).
4. Garantija grindžiama oficialiais ir vidiniais garso galios lygio matavimais. Oficialios išmatuotos vertės pateikiamos šiame dokumente kaip nuoroda. Oficialių matavimų ištraukos yra prieinamos ir galioja kartu su šiuo garantijos dokumentu. Matavimai atliekami laikantis rekomenduojamų nacionalinių ir tarptautinių standartų ir normų (paminėtų atitinkamose ištraukose).

Siekdama atsižvelgti į matavimo neapibrėžtumus ir garso prognozavimo skaičiavimus, padidinti priimtinumą valdžios institucijose ir išvengti galimų patikros matavimų, atlikdama garso sklidimo skaičiavimus, ENERCON rekomenduoja garantuojamų verčių 1 koeficiento (A) saugos koeficientą. Šalyse, kuriose saugos veiksniai jau yra privalomi dėl vietinių taisyklių, ENERCON rekomendacija netaikoma.

5. Dėl garso matavimų matavimo neapibrėžtumų garantuotas vertes pavyksta patikrinti, jei matavimų, atliktų pagal priimtus standartus, matavimo rezultatas yra +/- 1dB (A) garantuojamos vertės [garantija įvykdyta, kai matavimo rezultatas = garantuota vertė +/- 1dB (A)].
6. Triukšmui jautriose vietose E-70 galima naudoti su sumažintu sukimosi greičiu ir sumažinta vardine galia nakties metu. Sumažinti garso galios lygiai nurodyti atskirame dokumente.

Garso galios lygis
ENERCON E-82 E2
Vardinė galia 2000 kW
(Duomenų lapas)

Antspaudas:

Editor: ENERCON GmbH ▪ Dreekamp 5 ▪ 26605 Aurich ▪

Germany Telefonas: 04941-927-0

Faksas: 04941-927-109

Autorių teisės: Jei šiame dokumente nenurodyta kitaip, šio dokumento turinį saugo „ENERCON GmbH“ autorių teisės. Visos teisės saugomos. Jokio šios informacijos naudojimo, įskaitant kopijavimą ar skelbimą, naudoti be išankstinio rašytinio „ENERCON GmbH“ sutikimo negalima.

Atnaujinimai: „ENERCON GmbH“ pasilieka teisę bet kuriuo metu be išankstinio įspėjimo nuolat atnaujinti ir modifikuoti šį dokumentą ir jame aprašytus elementus.

Patikra

Patikra: 1.0

Skyrius: ENERCON GmbH / Vietos įvertinimas

Žodynas

WEC reiškia vėjo energijos keitiklį ENERCON.

WECs reiškia daugiau nei vieną ENERCON vėjo energijos keitiklį.

Garso galios lygis E-82 E2 su 2000 kW vardine galia

atsižvelgiant į vėjo greitį 10 m aukštyje					
Stiebo aukštis	78 m	85 m	98 m	108 m	138 m
Vėjo greitis 10 m aukštyje					
5 m/s	96,3 dB(A)	96.6 dB(A)	97.2 dB(A)	97.5 dB(A)	98.2 dB(A)
6 m/s	100.7 dB(A)	101.0 dB(A)	101.6 dB(A)	101.9 dB(A)	102.6 dB(A)
7 m/s	103.3 dB(A)	103.5 dB(A)	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)
8 m/s	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)
9 m/s	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)
10 m/s	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)
95% vardinės galios	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)	103,5 dB(A)

atsižvelgiant į vėjo greitį stiebo aukštyje									
Vėjo greitis ir stiebo aukštis [m/s]	7	8	9	10	11	12	13	14	15
Garso galios lygis [dB(A)]	96.6	99.9	102.6	103.5	103.5	103.5	103.5	103.5	103.5

- Garso galios lygio ir standartizuoto vėjo greičio, esančio 10 m aukštyje, santykis, kaip parodyta aukščiau, galioja esant logaritminiam vėjo profiliui, kurio šiurkštumo ilgis yra 0,05 m. Garso galios lygio ir vėjo greičio, esančio stebulės aukštyje, santykis taikomas visiems stebulės aukščiams. Atliekant garso matavimus, vėjo greitis nustatomas pagal išėjimo galią ir WEC galios kreivę.
- Visoje veikimo srityje gali būti tikimasi $\Delta L_a, k \leq 2$ dB toninio girdimumo (galioja netoli turbinos pagal IEC 61 400–11 red. 2).
- Lentelėje pateiktos garso galios lygio vertės galioja 2000 kW darbo režimui (apibrėžtam sukimosi greičio diapazonu nuo 6 iki 17,5 aps / min). Atitinkama galios kreivė yra apskaičiuota galios kreivė E-82 E2 2MW, 2009 m. Lapkričio mėn. (Red. 3.x).
- Aukščiau lentelėse pateiktos vertės yra pagrįstos oficialiais ir vidiniais garso galios lygio matavimais. Jei įmanoma, oficialios išmatuotos vertės pateikiamos šiame dokumente kaip nuoroda (kursyvu). Oficialių matavimų išrašus galima pateikti paprašius. Matavimo ištraukose nurodytos vertės nepakeičia šiame dokumente nurodytų verčių. Visi matavimai buvo atlikti pagal rekomenduojamus Vokietijos ir tarptautinius standartus ir gaires, kaip apibrėžta atitinkamai matavimo ataskaitose.
5. Dėl tipinių matavimo neapibrėžčių, jei garso galios lygis matuojamas vienu iš priimtų metodų, išmatuotos vertės gali skirtis nuo šiame dokumente pateiktų verčių intervale +/- 1 dB..

Priimami matavimo metodai:

- a) IEC 61400-11 ed. 2 („Vėjo turbinų generatorių sistemos. 11 dalis. Akustinio triukšmo matavimo būdai; antrasis leidimas, 2002–12“) ir
- b) FGW gairės („Vėjo energijos jėgainių techninės gairės. 1 dalis. Garso išmetimo verčių nustatymas“, paskelbta asociacijos „Vėjo energijos plėtros įmonė e.V.“, 18-oji redakcija).

Jei skirtumas tarp bendro ir foninio triukšmo matuojant yra mažesnis kaip 6 dB, reikia atsižvelgti į didesnę neapibrėžtį.

- 6. Triukšmui jautriose vietose E-82 E2 galima valdyti mažesniu sukimosi greičiu ir mažesne vardine galia naktį. Garso galios lygiai, atsirandantys dėl tokio veikimo režimo, paprašius, gali būti pateikti atskirame dokumente.
- 7. Vėjo turbinos garso galios lygis priklauso nuo kelių veiksnių, tokių kaip reguliari priežiūra ir kasdienis veikimas, tačiau neapsiribojama gamintojo naudojimo instrukcijomis. Todėl šis duomenų lapas negali ir nėra skirtas klientui aiškiai ar numanomai garantuoti, kad „E-82 E2 WEC“ bet kurioje konkrečioje projekto vietoje atitiks tikslias garso galios lygio vertes, kaip parodyta šiame dokumente.





**Triukšmo lygis dB(A).
Planuojama akustinė
situacija, foninės 4 VE
modelis Enercon E82
+ naujai planuojamos
2 VJ Enercon E82
modelio, Lvakaras**

< 35
35 - 40
40 - 45
45 - 50
50 - 55
55 - 60
60 - 65
65 - 70
70 - 75
75 - 80
80 - 85

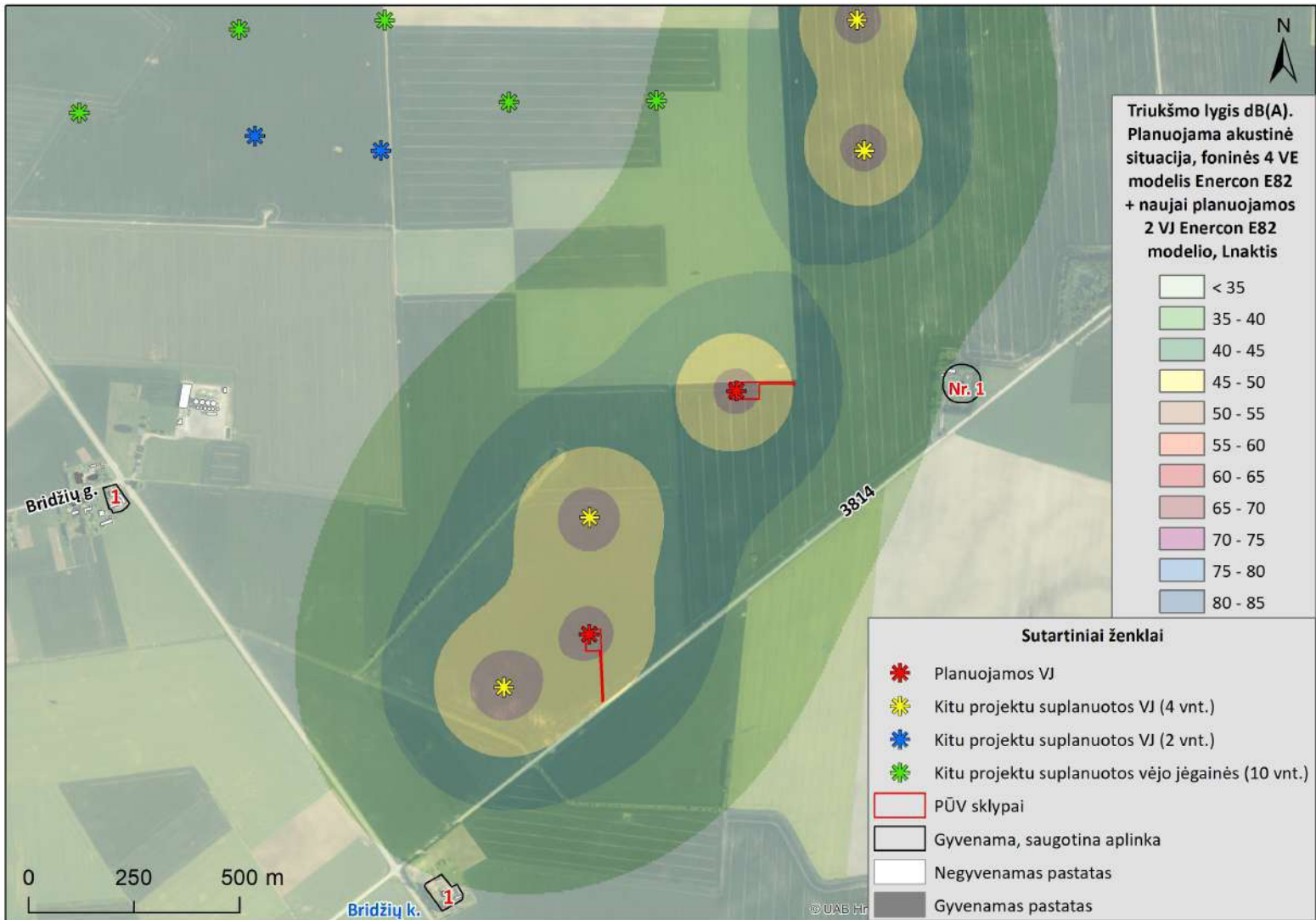
Sutartiniai ženklai

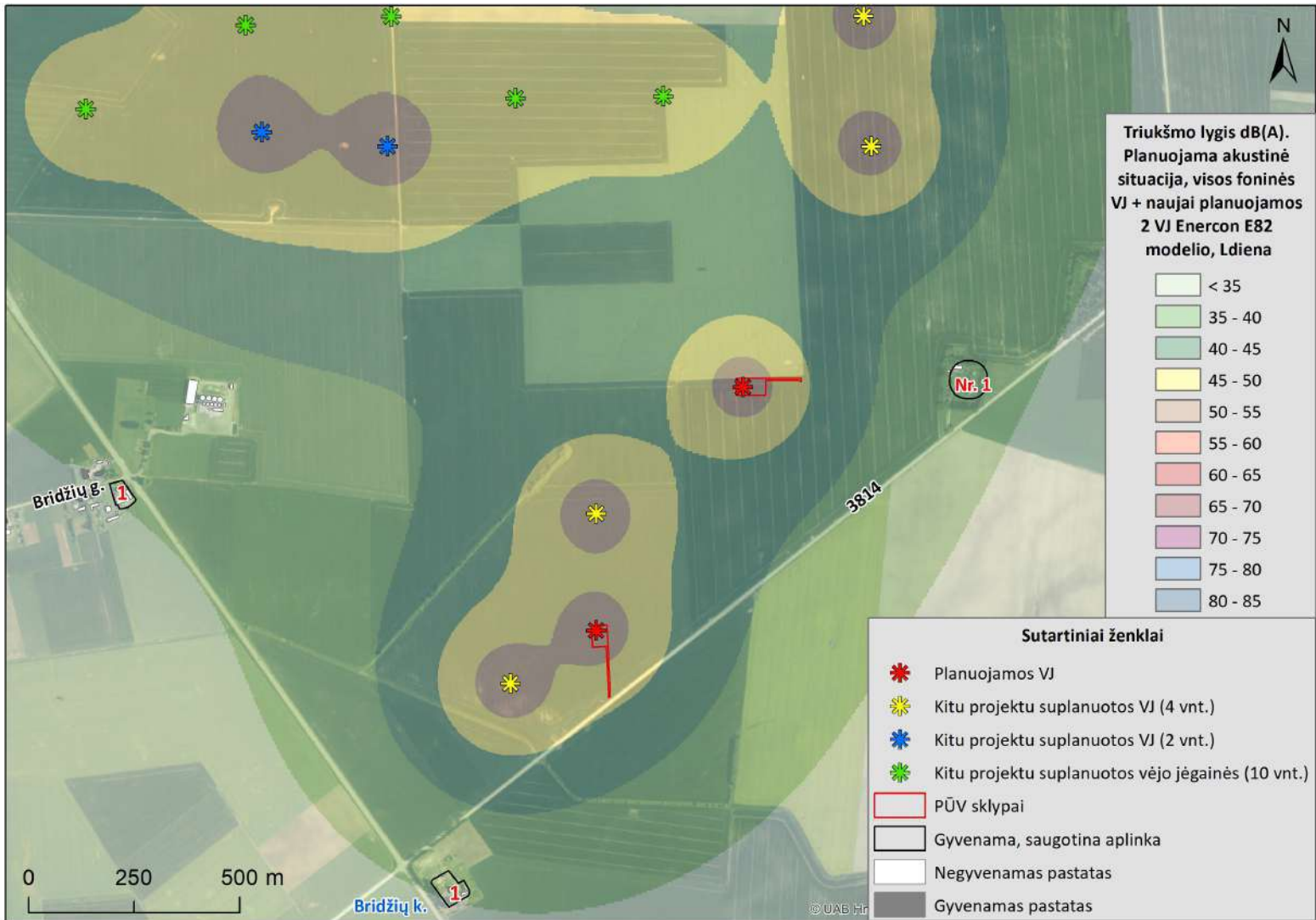
	Planuojamos VJ
	Kitu projektu suplanuotos VJ (4 vnt.)
	Kitu projektu suplanuotos VJ (2 vnt.)
	Kitu projektu suplanuotos vėjo jėgainės (10 vnt.)
	PŪV sklypai
	Gyvenama, saugotina aplinka
	Negyvenamas pastatas
	Gyvenamas pastatas

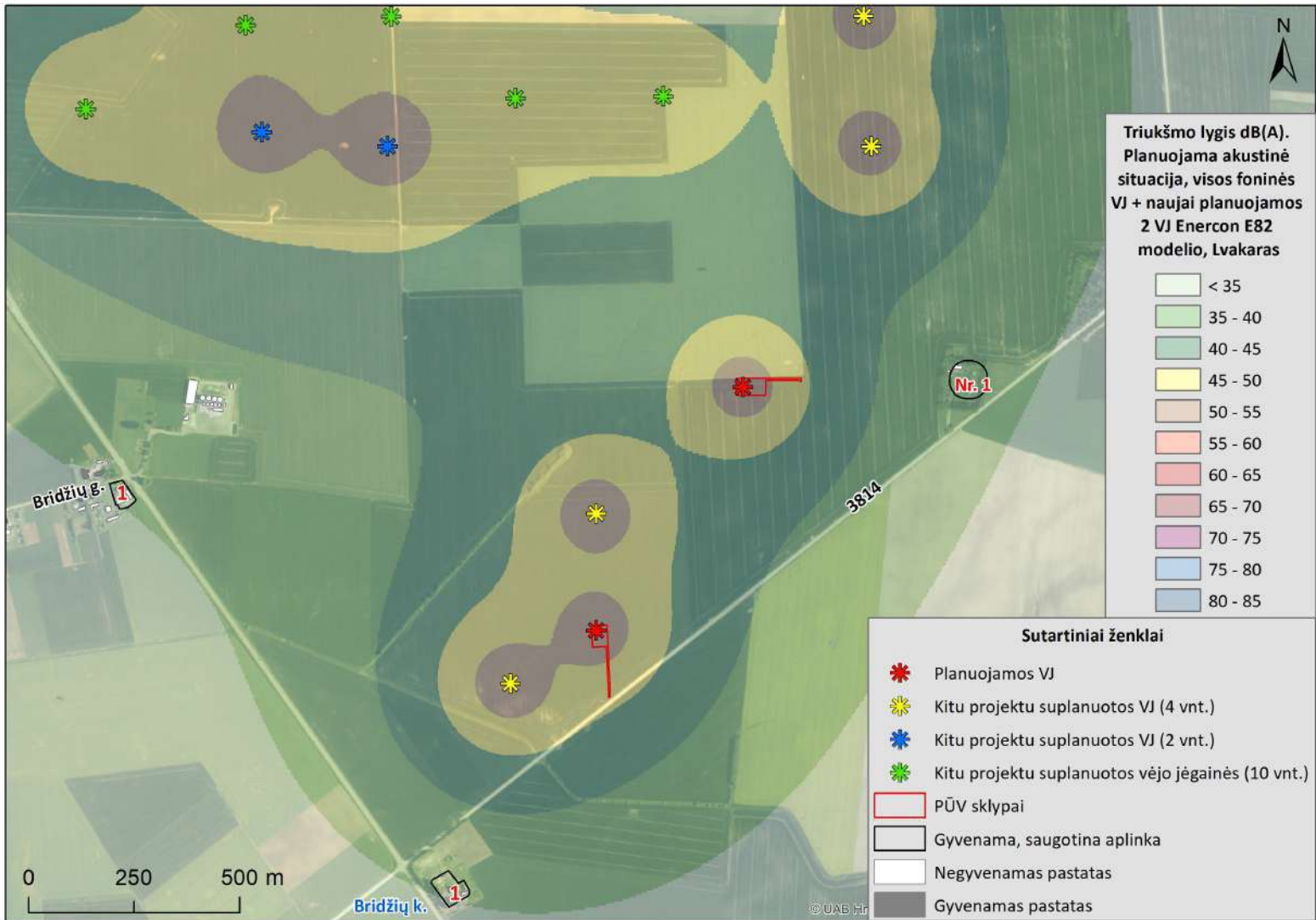
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Bridžių k.

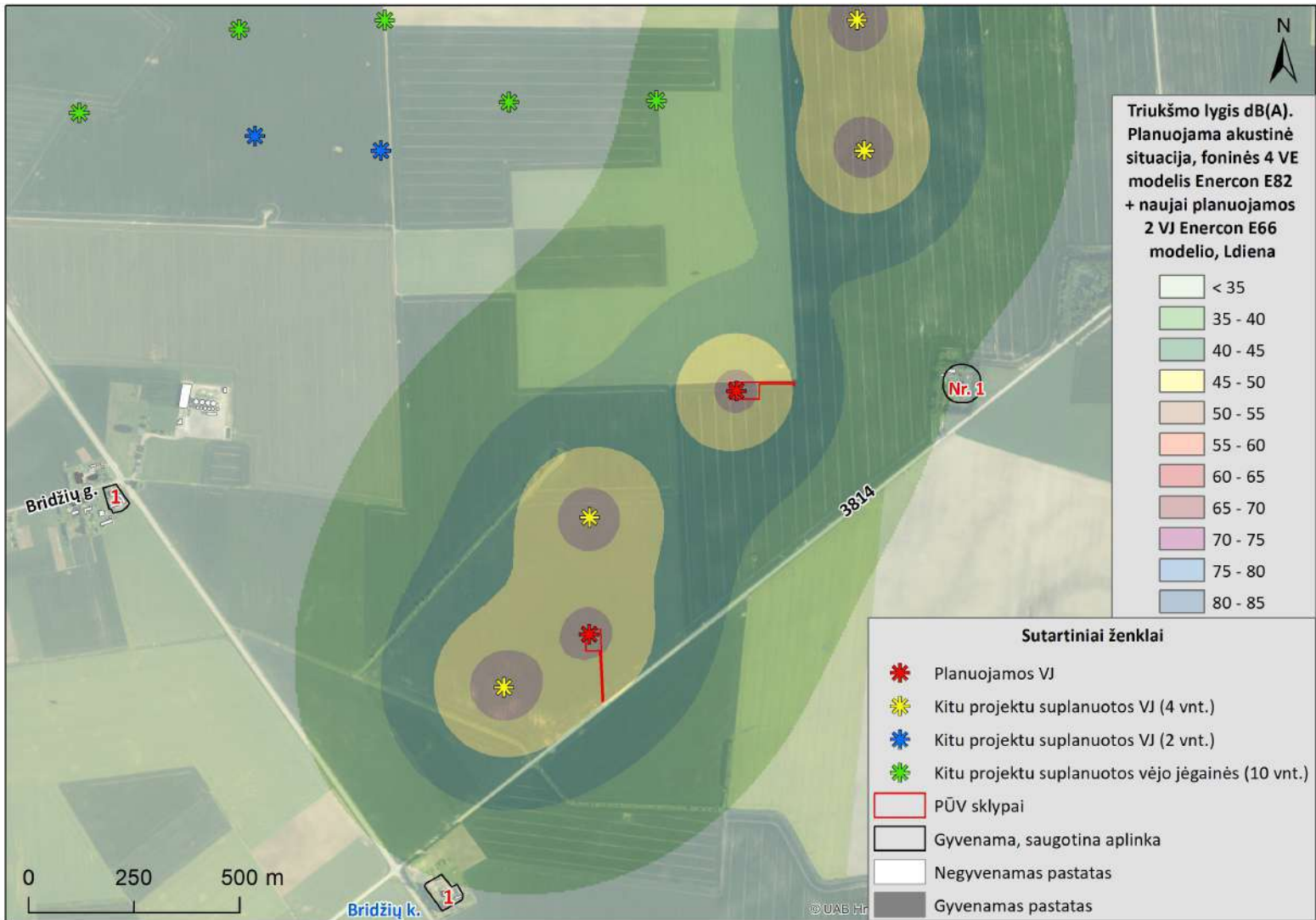
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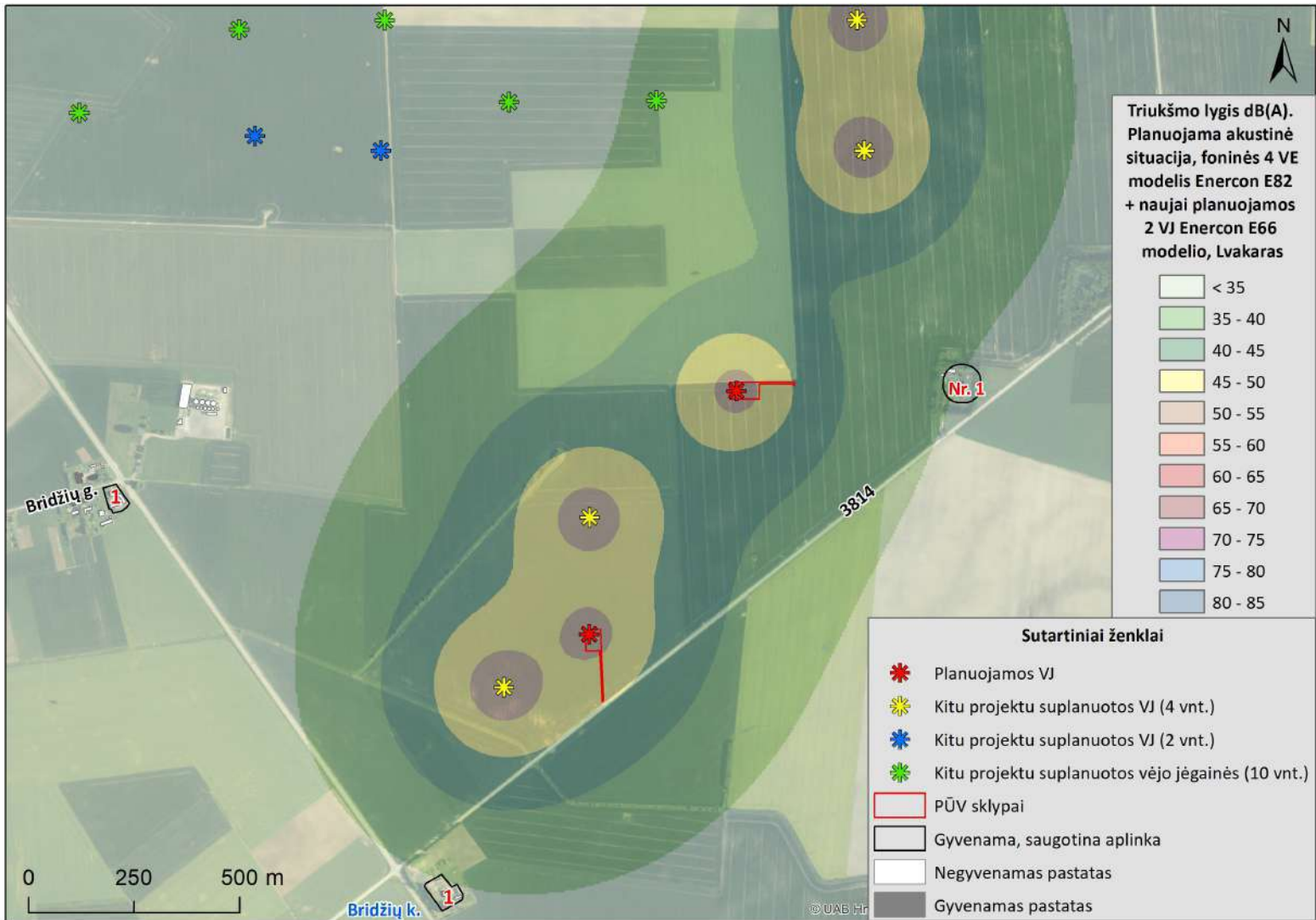


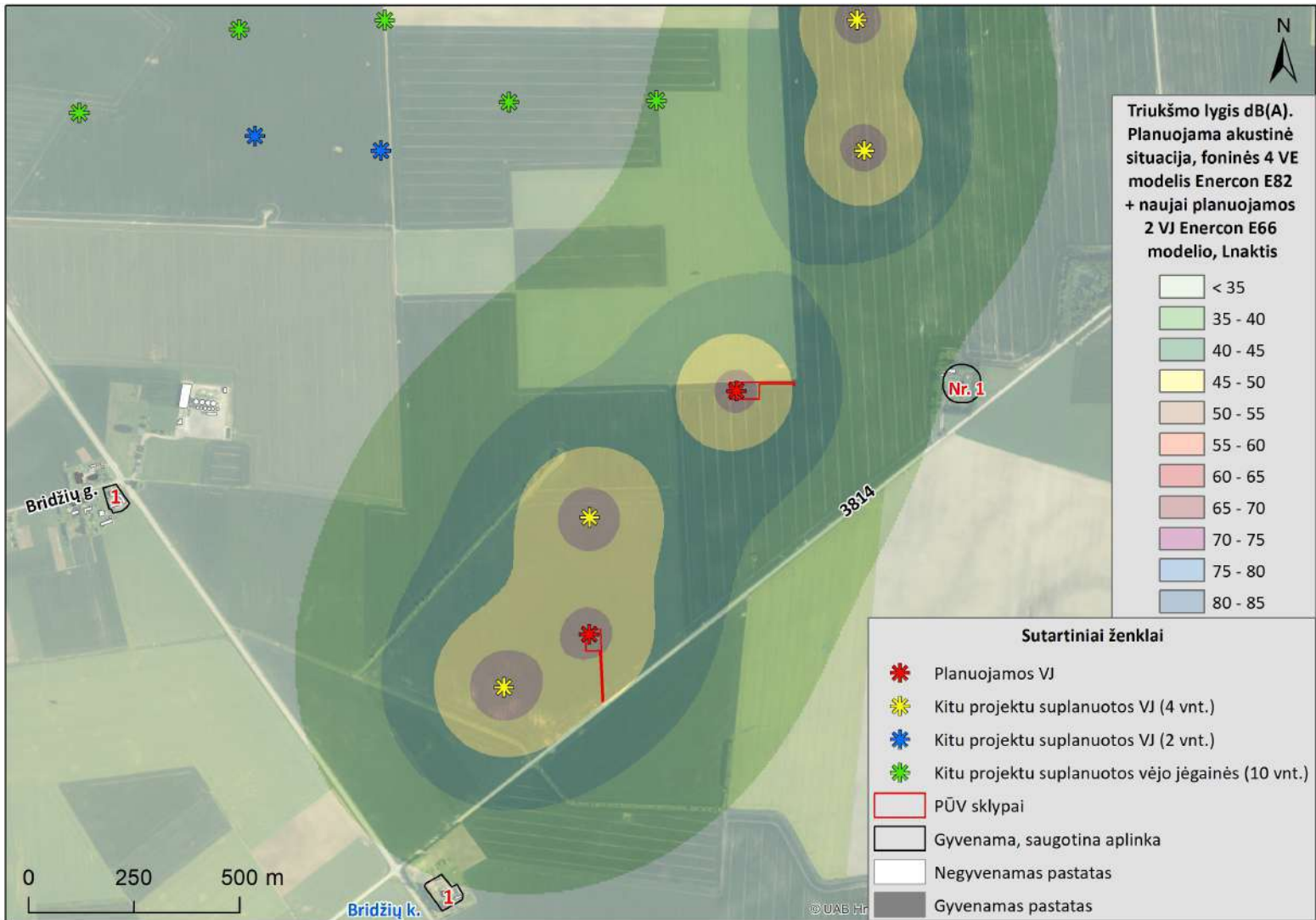














Triukšmo lygis dB(A).
 Planuojama akustinė
 situacija, visos foninės
 VJ + naujai planuojamos
 2 VJ Enercon E66
 modelio, Ldiena

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85

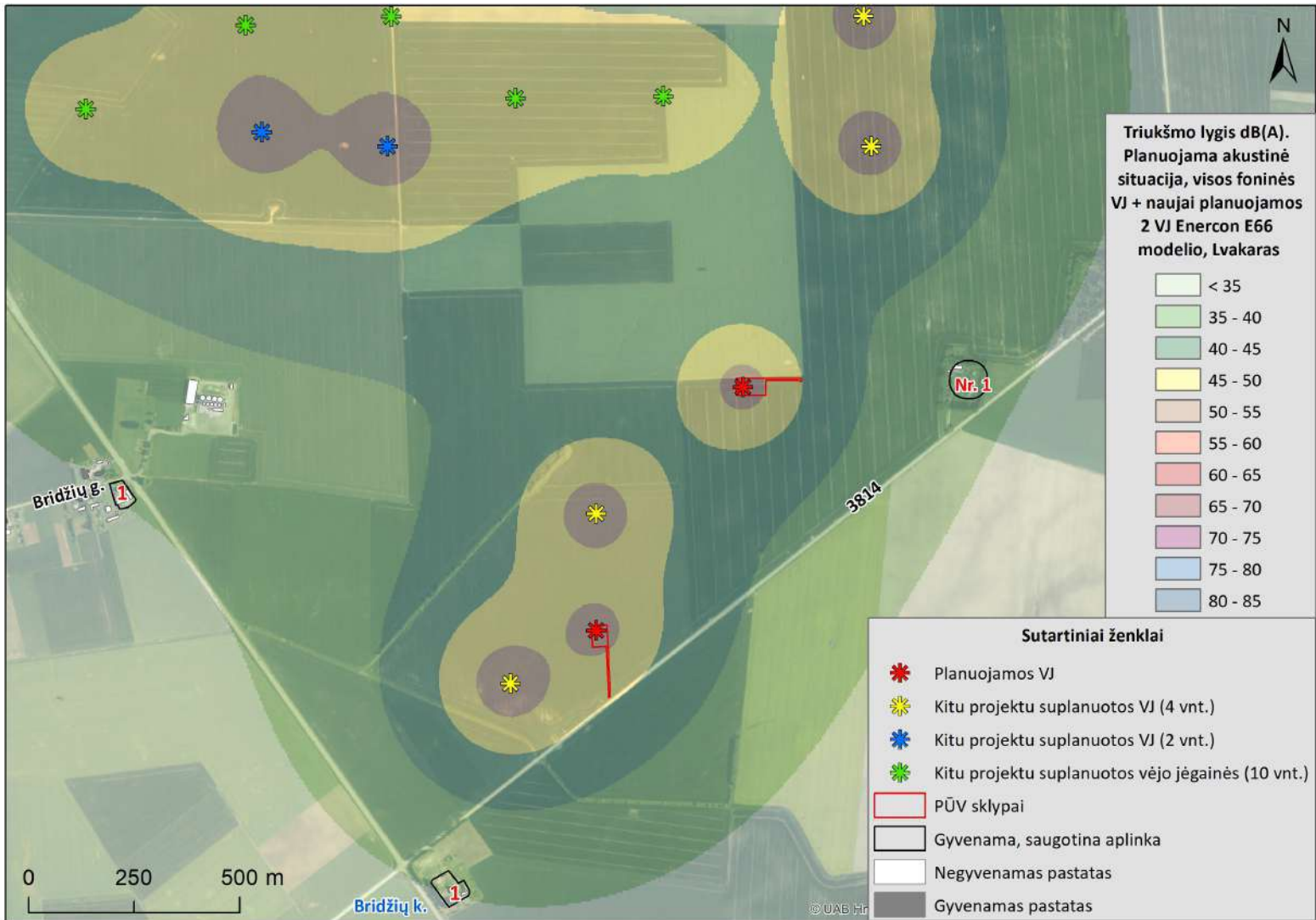
Sutartiniai ženklai

- ✳ Planuojamos VJ
- ✳ Kitu projektu suplanuotos VJ (4 vnt.)
- ✳ Kitu projektu suplanuotos VJ (2 vnt.)
- ✳ Kitu projektu suplanuotos vėjo jėgainės (10 vnt.)
- PŪV sklypai
- Gyvenama, saugotina aplinka
- Negyvenamas pastatas
- Gyvenamas pastatas

0 250 500 m

Bridžių k. 1

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Triukšmo lygis dB(A).
 Planuojama akustinė
 situacija, visos foninės
 VJ + naujai planuojamos
 2 VJ Enercon E66
 modelio, Lnaktis

- < 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- 80 - 85

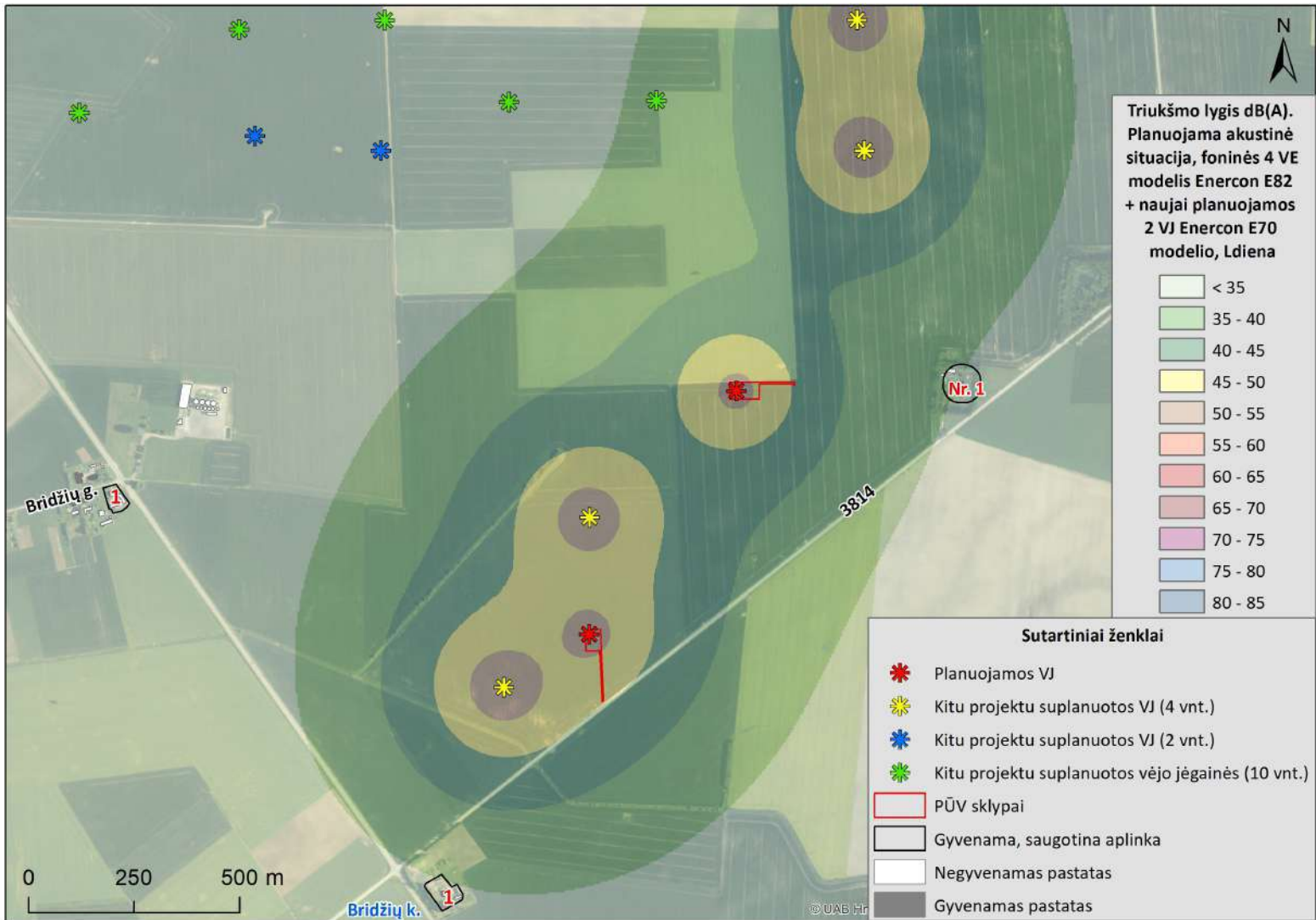
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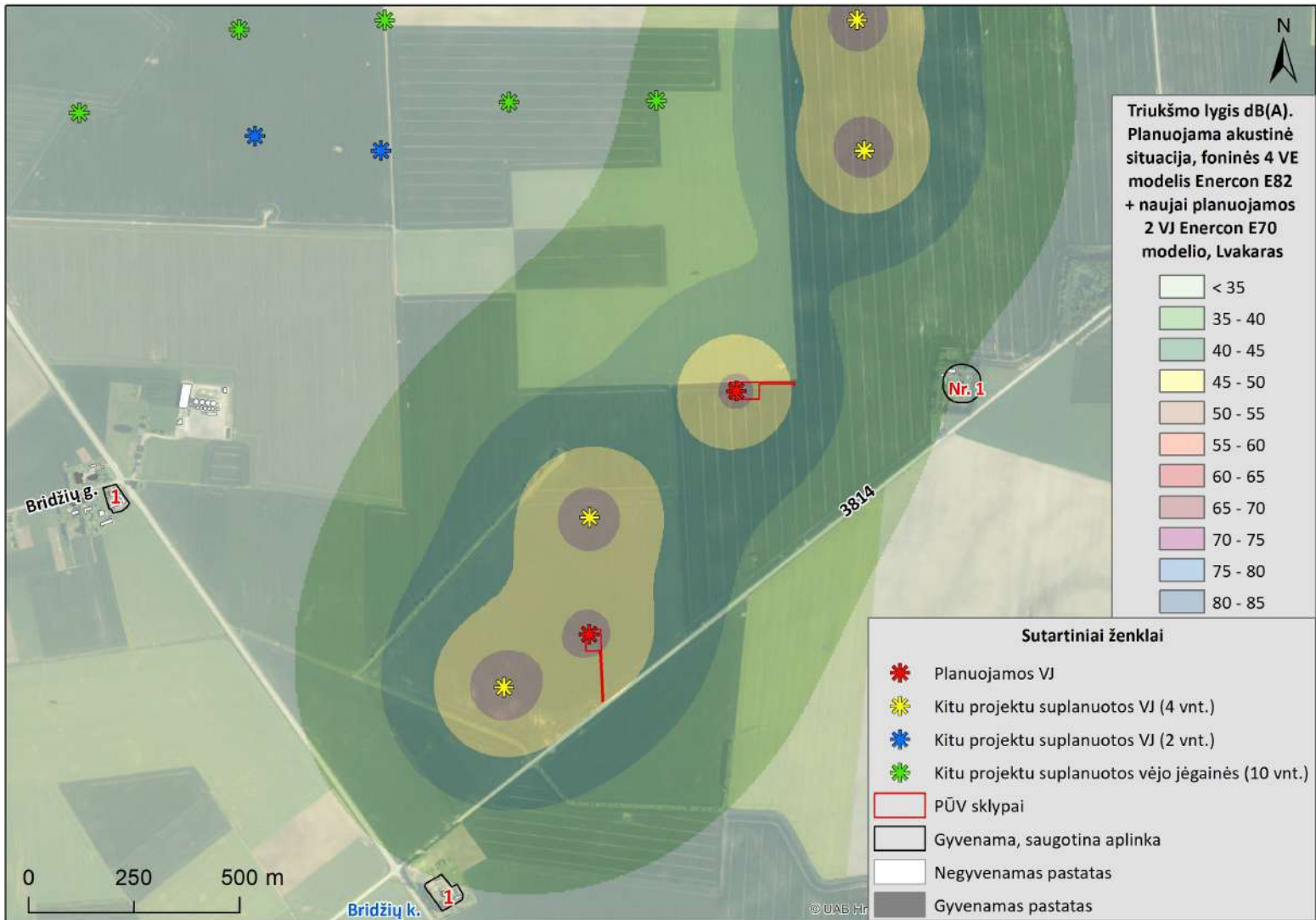
- ✳ Planuojamos VJ
- ✳ Kitu projektu suplanuotos VJ (4 vnt.)
- ✳ Kitu projektu suplanuotos VJ (2 vnt.)
- ✳ Kitu projektu suplanuotos vėjo jėgainės (10 vnt.)
- PŪV sklypai
- Gyvenama, saugotina aplinka
- Negyvenamas pastatas
- Gyvenamas pastatas

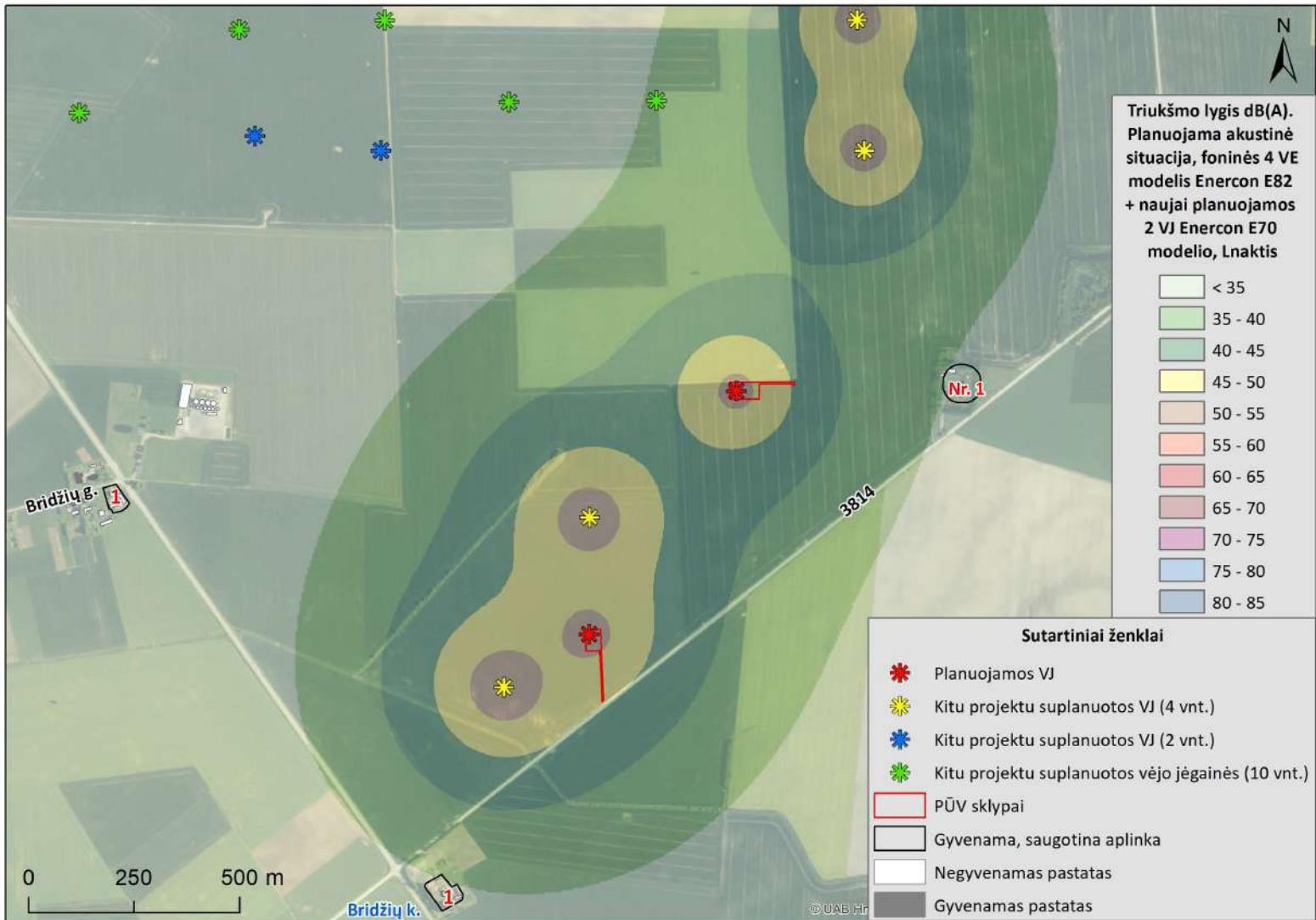
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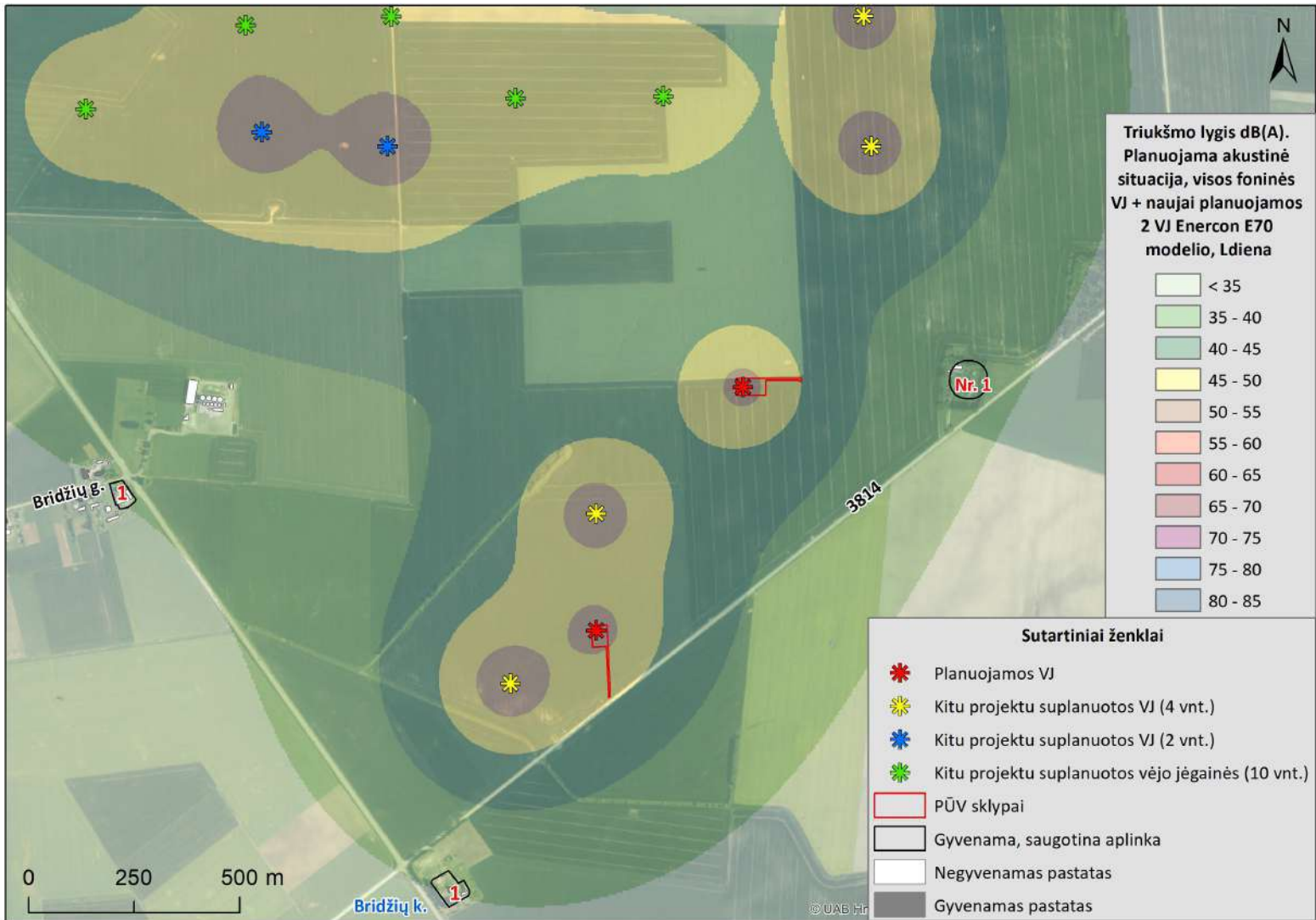
Bridžių k. 1

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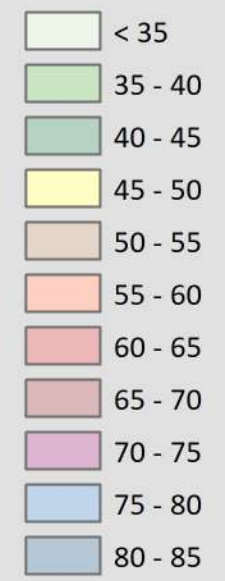
















Triukšmo lygis dB(A).
Planuojama akustinė
situacija, visos foninės
VJ + naujai planuojamos
2 VJ Enercon E70
modelio, Lnaktis



Sutartiniai ženklai

-  Planuojamos VJ
-  Kitu projektu suplanuotos VJ (4 vnt.)
-  Kitu projektu suplanuotos VJ (2 vnt.)
-  Kitu projektu suplanuotos vėjo jėgainės (10 vnt.)
-  PŪV sklypai
-  Gyvenama, saugotina aplinka
-  Negyvenamas pastatas
-  Gyvenamas pastatas



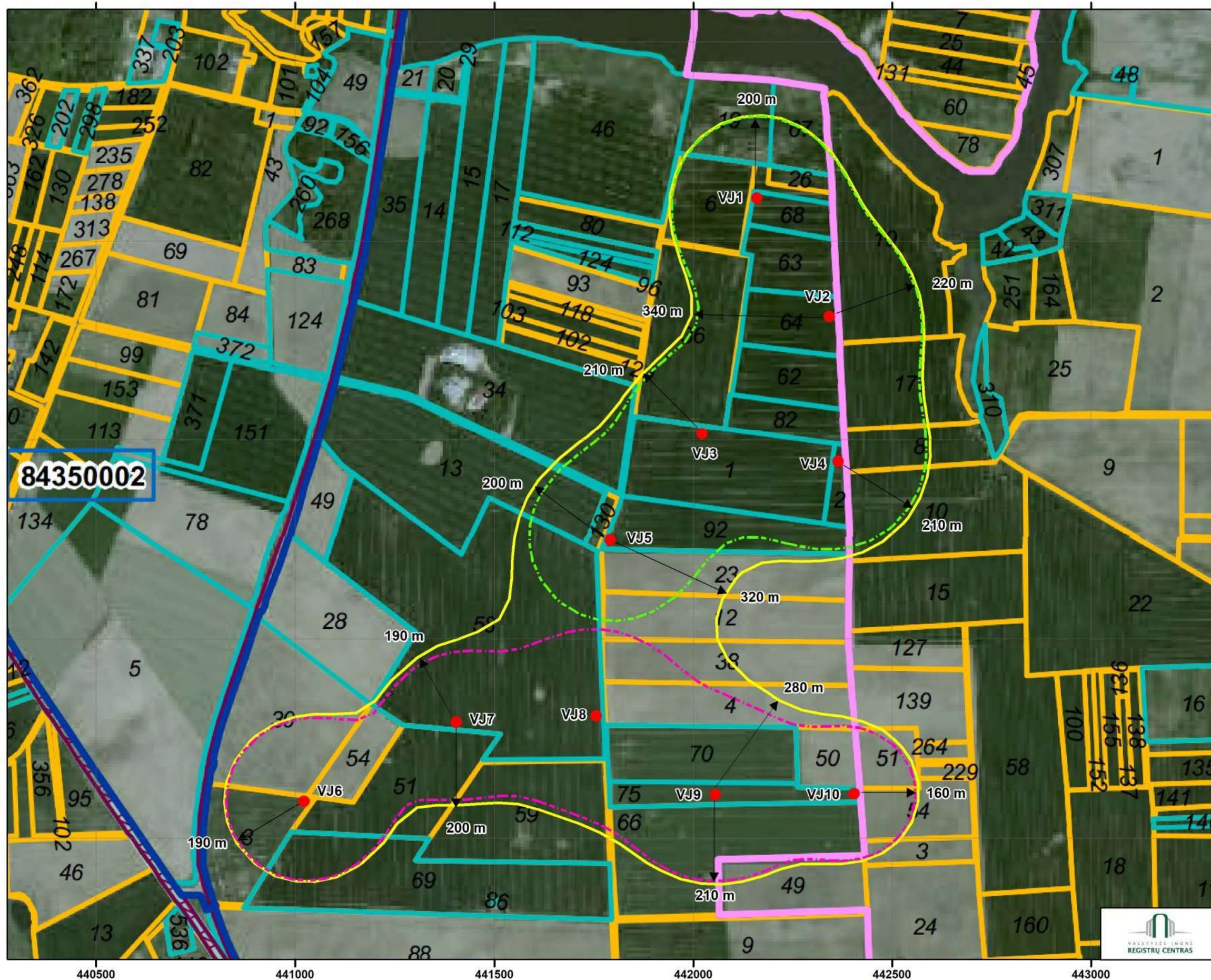
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Bridžių k.

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BRĖŽINYS SU NURODYTOMIS SANITARINĖS APSAUGOS ZONOS RIBOMIS, M 1:10000 / 1 VARIANTAS/

UAB "OTADA" PLANUOJAMOS ŪKINĖS VEIKLOS ŠAKIŲ R. SAV. LUKŠIŲ SEN. JURBŪDŽIŲ K. BEI ŠAKIŲ SEN. ARŽUOLUPIŲ IR BRIDŽIŲ K. POVEIKIO VISUOMENĖS SVEIKATAI VERTINIMO ATASKAITA



1 VARIANTAS
 STATOMA 10 VĖJO JĖGAINIŲ
 MODELIS: Enercon, E66/E70/E4, 1,8-2 MW
 BOKŠTO AUKŠTIS 63-98 M,
 GARSO LYGIS - 103 DBA.

Nakties periodu numatomas vėjo jėgainių darbo režimo reguliavimas, kad vėjo jėgainių Nr.3, Nr.7 ir Nr.10 garso lygis neviršytų 100,5 dBA.

1.1 VARIANTAS
 STATOMOS TIK 5 VĖJO JĖGAINĖS /Nr. 1 - 5/
 MODELIS: Enercon E66/E70/E4, 1,8-2 MW
 BOKŠTO AUKŠTIS 63-98 M,
 GARSO LYGIS - 103 DBA.

Nakties periodu numatomas vėjo jėgainių darbo režimo reguliavimas, kad vėjo jėgainės Nr. 3 garso lygis neviršytų 100,5 dBA.

1.2 VARIANTAS
 STATOMOS TIK 5 VĖJO JĖGAINĖS /Nr. 6 - 10/
 MODELIS: Enercon E66/E70/E4, 1,8-2 MW
 BOKŠTO AUKŠTIS 63-98 M,
 GARSO LYGIS - 103 DBA.

Nakties periodu numatomas vėjo jėgainių darbo režimo reguliavimas, kad vėjo jėgainių Nr.7 ir Nr.10 garso lygis neviršytų 100,5 dBA.

SUTARTINIAI ŽENKLAI

- - vėjo jėgainių statybos vieta
- Formuojama viena iš SAZ, atitinkanti 45 dBA garso lygio izoliniją:
 - SAZ riba statant pagal 1 variantą /apie 156 ha*/
 - - - SAZ riba statant pagal 1.1 variantą /apie 74 ha*/
 - - - SAZ riba statant pagal 1.2 variantą /apie 67 ha*/

* preliminarus SAZ plotas bus patikslintas atliekant kadastrinius matavimus

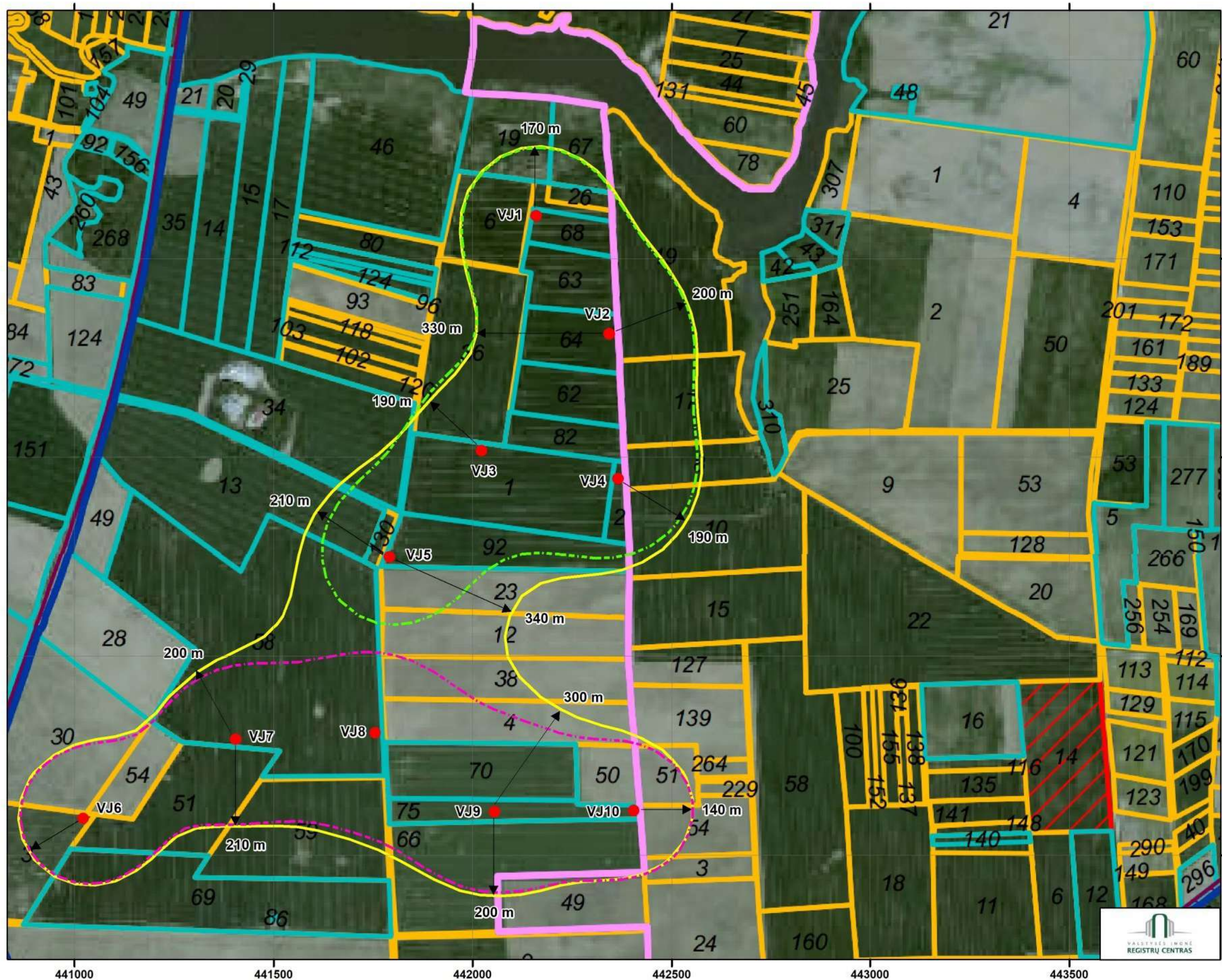
SAZ TVARKYMO REGLAMENTAS

Ūkinių veiklų apribojimai žemės sklypams, patenkantiems į SAZ: SAZ tvarkymo režimas nustatytas vadovaujantis Lietuvos Respublikos visuomenės sveikatos priežiūros įstatyme ir Specialiosiose žemės ir miško naudojimo sąlygose, patvirtintose Lietuvos Respublikos Vyriausybės 1992 m. gegužės 12 d. nutarimu Nr. 343 „Dėl Specialiųjų žemės ir miško naudojimo sąlygų patvirtinimo“ (aktuali redakcija nuo 2012-09-23) nurodytais reikalavimais. Nustatytoje ir įteisintoje sanitarinėje apsaugos zonoje draudžiama statyti gyvenamosios paskirties pastatus (namus), sodo namus, viešbučių, administracinių, prekybos, maitinimo, kultūros, mokslo, poilsio, gydymo, sporto ir religinės paskirties pastatus, specialiosios paskirties pastatus, susijusius su apgyvendinimu, įrengti minėtų objektų patalpas kitos paskirties pastatuose, steigti rekreacines teritorijas, išskyrus atvejus, kai minėti objektai naudojami tik įmonės reikmėms.



BRĖŽINYS SU NURODYTOMIS SANITARINĖS APSAUGOS ZONOS RIBOMIS, M 1:10000 /2 VARIANTAS/

UAB "OTADA" PLANUOJAMOS ŪKINĖS VEIKLOS ŠAKIŲ R. SAV. LUKŠIŲ SEN. JURBŪDŽIŲ K. BEI ŠAKIŲ SEN. ARŽUOLUPIŲ IR BRIDŽIŲ K. POVEIKIO VISUOMENĖS SVEIKATAI VERTINIMO ATASKAITA



2 VARIANTAS
 STATOMA 10 VĖJO JĖGAINIŲ
 MODELIS: Nordex N149,
 BOKŠTO AUKŠTIS 165 M,
 GARSO LYGIS - 103,6 DBA.

Nakties periodu numatomas vėjo jėginių darbo režimo reguliavimas, kad vėjo jėginės Nr. 3 garso lygis neviršytų 100,5 dBA, o vėjo jėginių Nr. 7 ir Nr.10 - 102,5 dBA.

2.1 VARIANTAS
 STATOMOS TIK 5 VĖJO JĖGAINĖS /Nr. 1 - 5/
 MODELIS: Nordex N149,
 BOKŠTO AUKŠTIS 165 M,
 GARSO LYGIS - 103,6 DBA.

Nakties periodu numatomas vėjo jėginių darbo režimo reguliavimas, kad vėjo jėginės Nr. 3 garso lygis neviršytų 102 dBA.

2.2 VARIANTAS
 STATOMOS TIK 5 VĖJO JĖGAINĖS /Nr. 6 - 10/
 MODELIS: Nordex N149,
 BOKŠTO AUKŠTIS 165 M,
 GARSO LYGIS - 103,6 DBA.

Nakties periodu numatomas vėjo jėginių darbo režimo reguliavimas, kad vėjo jėginių Nr.7 ir Nr.10 garso lygis neviršytų 103 dBA.

SUTARTINIAI ŽENKLAI

- - vėjo jėginių statybos vieta
- Formuojama viena iš SAZ, atitinkanti 45 dBA garso lygio izoliniją:
 - SAZ riba statant pagal 2 variantą /apie 150 ha*/
 - SAZ riba statant pagal 2.1 variantą /apie 67 ha*/
 - SAZ riba statant pagal 2.2 variantą /apie 64 ha*/

* preliminarus SAZ plotas bus patikslintas atliekant kadastrinius matavimus

SAZ TVARKYMO REGLAMENTAS

Ūkinių veiklų apribojimai žemės sklypams, patenkantiems į SAZ: SAZ tvarkymo režimas nustatytas vadovaujantis Lietuvos Respublikos visuomenės sveikatos priežiūros įstatyme ir Specialiosiose žemės ir miško naudojimo sąlygose, patvirtintose Lietuvos Respublikos Vyriausybės 1992 m. gegužės 12 d. nutarimu Nr. 343 „Dėl Specialiųjų žemės ir miško naudojimo sąlygų patvirtinimo“ (aktuali redakcija nuo 2012-09-23) nurodytais reikalavimais. Nustatytoje ir įteisintoje sanitarinėje apsaugos zonoje draudžiama statyti gyvenamosios paskirties pastatus (namus), sodo namus, viešbučių, administracinių, prekybos, maitinimo, kultūros, mokslo, poilsio, gydymo, sporto ir religinės paskirties pastatus, specialiosios paskirties pastatus, susijusius su apgyvendinimu, įrengti minėtų objektų patalpas kitos paskirties pastatuose, steigti rekreacines teritorijas, išskyrus atvejus, kai minėti objektai naudojami tik įmonės reikmėms.



7 Priedas. Infragarsas

NACIONALINĖ VISTUOMENĖS SVEIKATOS PRIEŽIŪROS LABORATORIJA
Biudžetinė įstaiga, Žolyno g. 36, LT-10210 Vilnius, tel. (8 5) 270 9229, faks. (8 5) 210 4848
Duomenys kaupiami ir saugomi Juridinių asmenų registre, kodas 195551983
e.l.p. nvsplj@nvsplj.lt, www.nvsplj.lt

SVEIKATOS RIZIKOS VEIKSNIŲ VERTINIMO SKYRIUS
FIZIKINIŲ VEIKSNIŲ TYRIMŲ POSKYRIS

Antakalnio g. 10, LT-10308 Vilnius, tel. (8 5) 260 84 21, faksas (8 5) 234 19 43, el.paštas priimamasis.antakalnio@nvsplj.lt
INFRAGARSO IR ŽEMO DAŽNIO GARSŲ TYRIMO PROTOKOLAS Nr. F-70-6/2019



20 19 m. vasario 22 d.

Bendroji dalis
Užsakovas: UAB "Infraplanas"

K. Donelaičio g. 55-2, Kaunas

(pavadinimas/vardas, pavardė)

(adresas)

Sutartis (pažymėkite X) nėra yra data 20 19 - 02 - 13 Nr. PR-K-169 Užsakymo registravimo data 20 19 - 02 - 19 Nr. 2350

Prašymo data 20 19 - 02 - 13 Nr. Tyrimo programa (pažymėkite X) nėra yra 2019-02-20 F-70-4-6

Infragarso ir žemo dažnio garsų tyrimo akto (-ų) data (-os) ir numeris (-iai)

Tyrimo objekto identifikavimas, aprašymas Gyvenamasis namas, Kreivėnų k. 2, Lauksargių sen., Tauragės r.

Tyrimas atliktas vadovaujantis LST ISO 1996-1:2017; LST ISO 1996-2:2017

Tyrimo pradžia 20 19 - 02 - 20 laikas 19:00 val. (monodinis žymuo, data, numeris) Tyrimo pabaiga 20 19 - 02 - 20 laikas 20:00 val.

Kita užsakovo pateikta informacija nenurodyta

*Meteorologinės sąlygos nenurodyta
Žemės paviršiaus danga ir būklė (aprašyti) nenurodyta
Vėjo greitis nenurodyta m/s Vėjo kryptis nenurodyta Oro temperatūra nenurodyta °C Atmosferos slėgis nenurodyta hPa
Oro santykinė drėgmė nenurodyta % Debesuota (pažymėkite X) taip ne Krituliai (pažymėkite X) yra nėra

Kitos matavimo sąlygos (pašviti) nenurodyta
Tyrimui naudotos priemonės
Infragarso ir žemo dažnio garsų tyrimas atliktas:
Tyrimo - vibracijos matavimas SVAN 948 Nr.8833, atlikros sertifikato Nr. 0817369 2018-09-13, kalibravimo liudijimo Nr. 041330 2018-09-13

Kalibravimas prieš matavimą (prietaiso pavadinimas, modelio numeris, patikros sertifikato/kalibravimo liudijimo Nr., data) C = 0,6 dB
Kalibravimas po matavimo C = 0,6 dB

Aplinkos sąlygų matavimai atlikti: Daugifunkcinė matavimo priemonė Testo 445 Nr.02236975, patikros sertifikato Nr. 0764501 2018-09-27, kalibravimo liudijimo Nr. 040852 2018-09-17; Nr. 56/18-A 2018-09-27

(prietaiso pavadinimas, modelio numeris, patikros sertifikato/kalibravimo liudijimo Nr., data)

Tyrimo rezultatai

Eil.Nr	Tyrimo vieta, tyrimo vietos aprašymas: Gyvenamasis kambarys, Krevėnų k. 2, Lauksargių sen., Tauragės r.										L _{CFmax} dB C±U	L _{AFmax} dB A±U	L _{CFmax} - L _{AFmax} dB			
	L _{CeqT} dB C±U	L _{AeqT} dB A±U	L _{CeqT} - L _{AeqT} dB	L _{CFmax} dB C±U	L _{AFmax} dB A±U	L _{CFmax} - L _{AFmax} dB										
	50,9 ± 1,1										24,6 ± 26,3	26,3	58,3 ± 1,3	40,3 ± 5,4	18,0	
Garso slėgio lygiai oktaivinėse dažnių juostose dB																
8 Hz	10 Hz	12,5 Hz	16 Hz	20 Hz	25 Hz	31,5 Hz	40 Hz	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	Įvertintasis garso slėgio lygis L _R : dB ± U, dB	Didžiausias F laikinis svertinis ir A dažninis svertinis garso slėgio lygis L _{AFmax} dB ± U, dB
57,2	58,6	58,5	56,2	48,1	41,0	36,3	28,6	26,3	28,4	21,9	25,9	27,2	19,3	20,6	14,9 ± 1,9	—
69,6	65,6	66,7	64,5	55,6	48,2	44,5	37,8	33,3	36,8	32,8	37,5	34,3	28,3	27,8	—	23,8 ± 1,5
—	—	—	—	—	—	—	—	—	—	—	—	11,1	—	9,7	Aiškiai pastebimų diskreciųjų tonų turinčių infragarso ir žemadažnio garso rodikliai DL ₁ , dB	
—	—	—	—	—	—	—	—	—	—	—	—	18,2	—	16,9	Aiškiai pastebimų diskreciųjų tonų turinčių infragarso ir žemadažnio garso rodikliai DL ₂ , dB	

Triukšmo šaltinis: **UAB "Revale" vėjo jėgainė "Enercon E40"**Garsų klasifikavimas: **visuminis**

Tyrimo sąlygų aprašymas:

1. Matavimų trukmė **15 min / 9 min** min, matavimo (v) laiko intervalas (-ai) **19:00 - 20:00 val.**
2. Mikrofono padėtis (pažymėti X) fiksuota nefiksuota aukštis nuo žemės paviršiaus **—** m aukštis nuo grindų paviršiaus **1,1 m** m
3. Šaltinio padėtis (pažymėti X) fiksuota nefiksuota aukštis nuo žemės paviršiaus **>1,5** m aukštis nuo grindų paviršiaus **—** m
4. Šaltinio veikimo sąlygų aprašymas
5. Papildoma informacija **—**

Aplinkos sąlygos

oro temperatūra **10** °Coro santykinė drėgmė **60** %Aplinkos sąlygų matavimo prietaiso jutiklių padėtys (aprašyti) **Matavimo aukštis 1,1 m.**

Pastabos *neurodyta*

Tyrima atliko:

Fizikinių tyrimų specialistas Donatas Jakšas

(pareigos, vardas, pavardė, parašas)

Priedai

eil. Nr.	Pavadinimas	Lapų sk.
—	—	—
—	—	—
—	—	—
—	—	—

Paaiškinimai

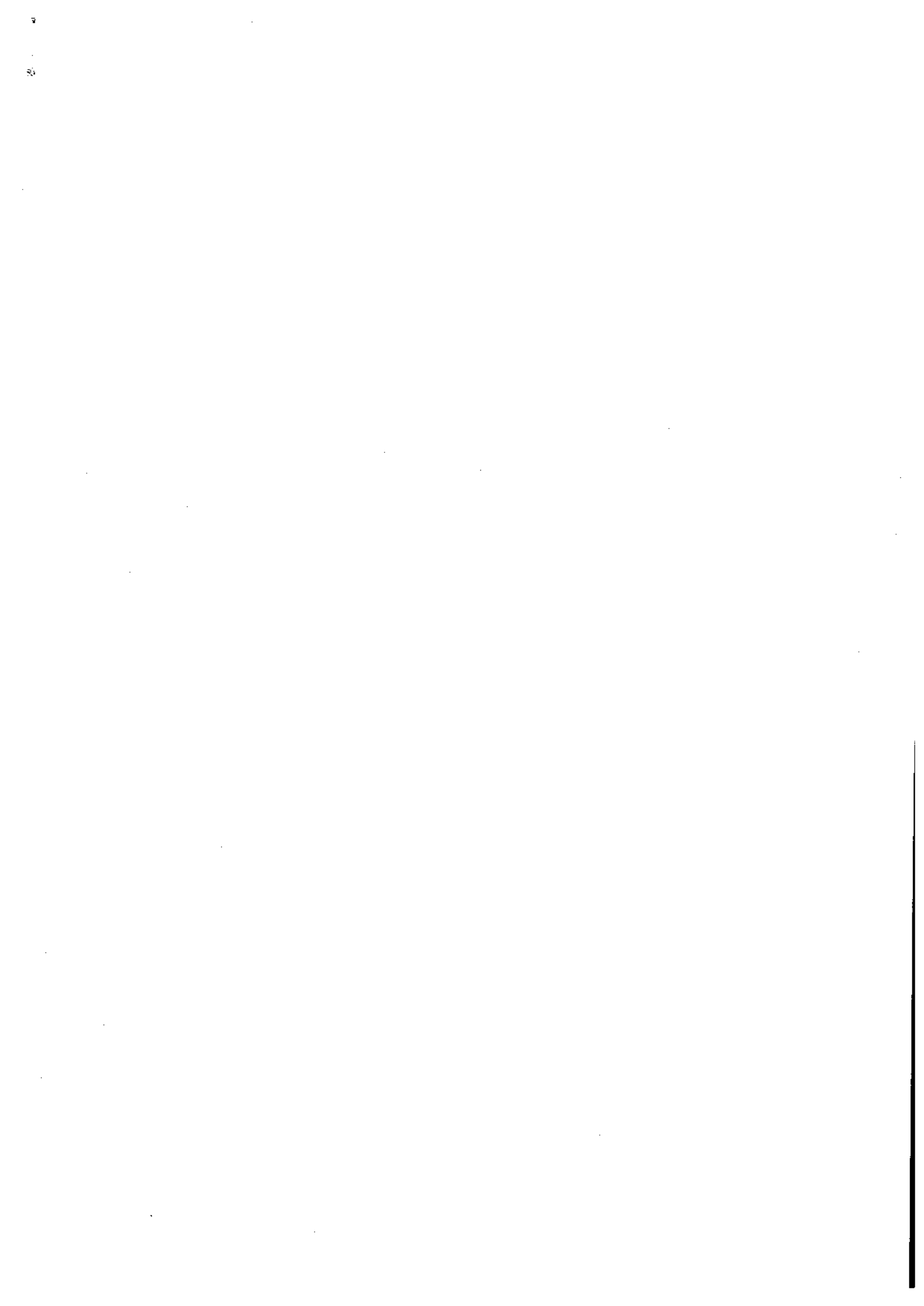
U	Pareikta išplestinė neapibrėžtis. Išplestinė neapibrėžtis apskaičiuota, suminę standartinę neapibrėžtį padauginus iš aprėpties daugiklio $k=2$, kuris, esant normaliajam skirstiniui, atitinka 95% pasikiovimą lygmeni.
N	Neakredituotas metodas
*	Kai matavimai atliekami ne vieno dieną/vakarą/naktį, informacija pateikiama prielaidose.
	Tyrimo protokolo perdavimo būdas [A]-asmeniškai

Tvirtinur:

Fizikinių tyrimų specialistė Alina Kaciūskienė

(pareigos, vardas, pavardė, parašas)

Tyrimo rezultatai susiję tik su tiriamąja vieta



8 PRIEDAS. Šešėliai

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
 K. Donelaicio str. 55-2
 LT-44245 Kaunas
 +370 37 407548
 Raminta Survilè / r.surville@infraplanas.lt
 Calculated:
 2021.06.16 13:30/3.4.415

SHADOW - Main Result

Calculation: Planuojamos Enercon E66

Assumptions for shadow calculations

Maximum distance for influence
 Calculate only when more than 20 % of sun is covered by the blade
 Please look in WTG table

Minimum sun height over horizon for influence 3 °
 Day step for calculation 1 days
 Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
 Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo
 Obstacles used in calculation
 Eye height for map: 1,5 m
 Grid resolution: 1,0 m

All coordinates are in
 Lithuanian TM LKS94-LKS94 (LT)
 WTGs



	Y	X	Z	Row data/Description	WTG type			Shadow data			
					Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Calculation distance [m]
1	442.261	6.087.347	50,0	ENERCON E-66/20.70 2000 70.0 !-!...No	ENERCON	E-66/20.70-2.000	2.000	70,0	85,0	2.500	22,0
2	442.609	6.087.922	50,0	ENERCON E-66/20.70 2000 70.0 !-!...No	ENERCON	E-66/20.70-2.000	2.000	70,0	85,0	2.500	22,0
3	442.891	6.088.803	50,3	ENERCON E-82 2000 82.0 !O! hub: ...No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
4	442.908	6.088.497	50,0	ENERCON E-82 2000 82.0 !O! hub: ...No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
5	442.265	6.087.626	50,0	ENERCON E-82 2000 82.0 !O! hub: ...No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
6	442.058	6.087.221	50,0	ENERCON E-82 2000 82.0 !O! hub: ...No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5

Shadow receptor-Input

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Calculation Results

Shadow receptor
 Shadow, expected values
 No. Shadow hours per year [h/year]
 A 3:29
 B 3:57

To be continued on next page...

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 13:30/3.4.415

SHADOW - Main Result

Calculation: Planuojamos Enercon E66

...continued from previous page

Shadow, expected values

No.	Shadow hours per year [h/year]
C	3:57
D	3:26
E	3:11
F	2:08
G	1:53
H	8:46
I	1:40
J	1:00
K	0:50
L	0:41
M	0:00

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Expected [h/year]
1	ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)	13:26	3:43
2	ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)	18:41	7:25
3	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)	0:00	0:00
4	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)	0:00	0:00
5	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)	14:21	4:46
6	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)	18:05	4:43

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
 Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:46 (1) 20:03	07:03 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (1) 20:05	07:00 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (1) 20:07	06:57 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (1) 20:09	06:55 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	07:37 (1) 20:11	06:52 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:37 (1) 20:13	06:50 21:11	04:54 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	07:38 (1) 20:15	06:47 21:13	04:53 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	07:40 (1) 20:17	06:45 21:15	05:36 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:46 (1) 20:19	06:42 21:17	05:34 22:03
10	08:49 16:22	08:03 17:23	06:58 18:20	07:40 (1) 20:21	06:40 21:19	05:32 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	07:49 (1) 20:23	06:37 21:20	05:30 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	07:48 (1) 20:25	06:35 21:22	05:28 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	07:49 (1) 20:27	06:33 21:24	05:26 22:07
14	08:46 16:29	07:55 17:31	08:22 (6) 18:28	06:30 20:29	05:24 21:26	04:50 22:07
15	08:45 16:31	07:53 17:33	08:19 (6) 18:30	06:28 20:31	05:23 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	08:17 (6) 18:32	06:25 20:33	05:21 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	08:15 (6) 18:34	06:23 20:34	05:19 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	08:12 (6) 18:36	06:20 20:36	05:17 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	08:10 (6) 18:38	07:00 (5) 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	08:10 (6) 18:40	06:57 (5) 20:40	05:14 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	08:10 (6) 18:42	06:55 (5) 20:42	05:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	08:11 (6) 18:44	06:52 (5) 20:44	05:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	08:12 (6) 18:46	06:50 (5) 20:46	05:10 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	08:14 (6) 18:48	06:47 (5) 20:48	05:08 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	08:22 (6) 18:50	06:47 (5) 20:50	05:07 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	06:18 18:52	07:01 (5) 20:52	05:05 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 18:54	06:49 (5) 20:54	05:04 21:47	04:51 22:11
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11
29	08:26 16:58	07:21 18:02	07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10
30	08:24 17:00	07:19 18:04	07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10
31	08:22 17:02	07:17 18:06	07:05 20:01	05:51 21:01	04:59 21:53	04:53 22:10
Potential sun hours	244	270	366	422	499	517
Total, worst case		134	168	33		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,91	0,98	0,98		
Total reduction		0,22	0,33	0,39		
Total, real		30	56	13		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December	
1	04:54 22:10	05:36 21:32	06:33 20:23	07:03 (2) 19:07	07:29 16:53	08:27 16:06	
2	04:54 22:09	05:37 21:30	06:35 20:20	07:03 (2) 19:04	07:31 16:51	08:29 16:05	
3	04:55 22:09	05:39 21:29	06:36 20:18	07:05 (2) 19:01	07:32 16:49	08:30 16:05	
4	04:56 22:08	05:41 21:27	06:38 20:15	07:06 (2) 18:59	07:34 16:47	08:32 16:04	
5	04:57 22:08	05:43 21:25	06:40 20:13	07:08 (2) 18:56	07:36 16:45	08:34 16:03	
6	04:58 22:07	05:45 21:23	06:42 20:10	07:11 (2) 18:54	07:38 16:43	08:35 16:03	
7	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:14 (1) 16:41	08:36 16:02	
8	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	11 13	08:25 (1) 16:39	16:02 16:02
9	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	14	08:12 (1) 16:37	08:39 16:01
10	05:02 22:04	05:52 21:14	06:49 20:00	07:46 18:44	11	08:14 (1) 16:35	08:40 16:01
11	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:41	8	08:16 (1) 16:34	08:41 16:01
12	05:05 22:02	05:55 21:10	06:53 19:55	07:50 18:39	5	08:18 (1) 16:32	08:43 16:00
13	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	1	08:20 (1) 16:30	08:44 16:00
14	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34		07:56 16:28	08:45 16:00
15	05:08 21:59	06:01 21:03	06:59 19:47	07:56 18:32		07:58 16:27	08:46 16:00
16	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29		08:00 16:25	08:47 16:00
17	05:11 21:56	06:05 20:59	07:02 19:42	07:37 (5) 18:27	3	08:02 16:23	08:47 16:00
18	05:13 21:55	06:07 20:57	07:04 19:40	07:49 (5) 18:25	10	08:04 (6) 16:22	08:48 16:00
19	05:14 21:54	06:08 20:54	07:06 19:37	07:34 (5) 18:22	14	08:04 (6) 16:20	08:49 16:01
20	05:16 21:52	06:10 20:52	07:08 19:35	07:35 (5) 18:20	16	08:06 (6) 16:19	08:50 16:01
21	05:17 21:51	06:12 20:50	07:10 19:32	07:37 (5) 18:18	17	08:08 (6) 16:18	08:50 16:01
22	05:19 21:49	06:14 20:47	07:12 19:30	07:39 (5) 18:15	18	08:10 (6) 16:16	08:51 16:02
23	05:20 21:48	06:16 20:45	07:14 19:27	07:41 (5) 18:13	17	08:12 (6) 16:15	08:51 16:02
24	05:22 21:46	06:18 20:42	07:16 19:24	07:43 (5) 18:11	14	08:13 (6) 16:14	08:52 16:03
25	05:24 21:45	06:20 20:40	07:17 19:22	07:46 (5) 17:08	12	08:14 (6) 16:12	08:52 16:04
26	05:25 21:43	06:22 20:38	07:19 19:19	07:18 17:06	9	08:15 (6) 16:11	08:52 16:04
27	05:27 21:41	06:23 20:35	07:21 19:17	07:20 17:04	6	08:16 (6) 16:10	08:53 16:05
28	05:29 21:40	06:25 20:33	07:23 19:14	07:22 17:02	2	08:17 (6) 16:09	08:53 16:06
29	05:30 21:38	06:27 20:30	07:25 19:12	07:24 17:00		08:18 (6) 16:08	08:53 16:07
30	05:32 21:36	06:29 20:28	07:27 19:09	07:26 16:57		08:19 (6) 16:07	08:53 16:08
31	05:34 21:34	06:31 20:25	07:06 (2) 07:09 (2)	07:28 16:55		08:20 (6) 16:07	08:53 16:09
Potential sun hours	519	464	383	327	254	227	
Total, worst case			3	126	212		
Sun reduction			0,52	0,40	0,31		
Oper. time red.			1,00	1,00	1,00		
Wind dir. red.			0,98	1,00	0,93		
Total reduction			0,51	0,39	0,28		
Total, real			2	49	60		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (1) 07:46 (1)	06:57 20:07	05:46 21:05
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (1) 07:46 (1)	06:55 20:09	05:44 21:07
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 07:47 (1)	06:52 20:11	05:42 21:09
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:47 (1)	06:50 20:13	05:40 21:11
7	08:51 16:18	08:09 17:16	07:06 18:14	07:32 (1) 07:46 (1)	06:47 20:15	05:38 21:13
8	08:50 16:19	08:07 17:18	07:03 18:16	07:33 (1) 07:46 (1)	06:45 20:17	05:36 21:15
9	08:50 16:21	08:05 17:21	07:01 18:18	07:33 (1) 07:44 (1)	06:42 20:19	07:07 (2) 21:17
10	08:49 16:22	08:03 17:23	06:58 18:20	07:35 (1) 07:43 (1)	06:40 20:21	07:04 (2) 21:19
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:02 (2) 07:09 (2)	05:30 21:20
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:00 (2) 07:09 (2)	05:28 21:22
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	06:58 (2) 07:07 (2)	05:26 21:24
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	06:59 (2) 07:06 (2)	05:24 21:26
15	08:45 16:31	07:53 17:33	08:19 (6) 08:21 (6)	06:46 18:30	06:28 20:31	05:23 21:28
16	08:44 16:33	07:50 17:35	08:17 (6) 08:23 (6)	06:43 18:32	06:25 20:33	05:21 21:29
17	08:42 16:34	07:48 17:37	08:15 (6) 08:24 (6)	06:41 18:34	06:23 20:34	05:19 21:31
18	08:41 16:36	07:46 17:39	08:12 (6) 08:24 (6)	06:38 18:36	06:20 20:36	05:17 21:33
19	08:40 16:38	07:44 17:42	08:10 (6) 08:25 (6)	06:36 18:38	06:18 20:38	05:16 21:35
20	08:39 16:40	07:41 17:44	08:08 (6) 08:26 (6)	06:33 18:40	06:16 20:40	05:14 21:36
21	08:38 16:42	07:39 17:46	08:06 (6) 08:25 (6)	06:31 18:42	06:13 20:42	05:13 21:38
22	08:36 16:44	07:37 17:48	08:07 (6) 08:25 (6)	06:28 18:44	06:11 20:44	05:11 21:40
23	08:35 16:46	07:35 17:50	08:07 (6) 08:24 (6)	06:25 18:46	06:09 20:46	05:10 21:41
24	08:33 16:48	07:32 17:52	08:08 (6) 08:23 (6)	06:23 18:48	06:06 20:48	05:08 21:43
25	08:32 16:50	07:30 17:54	08:08 (6) 08:21 (6)	06:20 18:50	06:04 20:50	05:07 21:44
26	08:30 16:52	07:28 17:56	08:11 (6) 08:19 (6)	06:18 18:52	06:02 20:52	05:05 21:46
27	08:29 16:54	07:25 17:58	06:15 18:54	06:40 (5) 06:56 (5)	05:59 20:54	05:04 21:47
28	08:27 16:56	07:23 18:00	06:13 18:56	06:41 (5) 06:56 (5)	05:57 20:56	05:03 21:49
29	08:26 16:58	07:21 18:02	07:10 19:58	07:41 (5) 07:54 (5)	05:55 20:58	05:02 21:50
30	08:24 17:00	07:19 18:04	07:08 20:00	07:43 (5) 07:52 (5)	05:53 21:00	05:00 21:52
31	08:22 17:02	07:17 18:06	07:05 20:01	07:52 (5)	21:00	04:59 21:53
Potential sun hours	244	270	366	422	499	517
Total, worst case		152	188	37		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,91	0,99	0,98		
Total reduction		0,22	0,33	0,38		
Total, real		34	63	14		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:36	06:33	07:01 (2)	07:29	07:30	08:27	
	22:10	21:32	20:23	7 07:08 (2)	19:07	16:53	16:06	
2	04:54	05:37	06:35	07:03 (2)	07:31	07:32	08:29	
	22:09	21:30	20:20	4 07:07 (2)	19:04	16:51	16:05	
3	04:55	05:39	06:36	07:05 (2)	07:32	08:15 (1)	08:30	
	22:09	21:29	20:18	1 07:06 (2)	19:01	4 08:19 (1)	16:49	16:05
4	04:56	05:41	06:38	07:34	07:34	08:12 (1)	07:36	08:32
	22:08	21:27	20:15	18:59	10 08:22 (1)	16:47	16:04	
5	04:57	05:43	06:40	07:36	08:10 (1)	07:38	08:33	
	22:08	21:25	20:13	18:56	12 08:22 (1)	16:45	16:03	
6	04:58	05:45	06:42	07:38	08:10 (1)	07:40	08:35	
	22:07	21:23	20:10	18:54	13 08:23 (1)	16:43	16:03	
7	04:59	05:46	06:44	07:40	08:09 (1)	07:42	08:36	
	22:06	21:21	20:08	18:51	14 08:23 (1)	16:41	16:02	
8	05:00	05:48	06:46	07:42	08:10 (1)	07:44	08:38	
	22:06	21:18	20:05	18:49	12 08:22 (1)	16:39	16:02	
9	05:01	05:50	06:48	07:44	08:12 (1)	07:46	08:39	
	22:05	21:16	20:03	18:46	10 08:22 (1)	16:37	16:01	
10	05:02	05:52	06:49	07:46	08:14 (1)	07:48	08:40	
	22:04	21:14	20:00	18:44	7 08:21 (1)	16:35	16:01	
11	05:03	05:54	06:51	07:48	08:16 (1)	07:50	08:41	
	22:03	21:12	19:58	18:41	3 08:19 (1)	16:34	16:01	
12	05:05	05:55	06:53	07:50	07:50	07:52	08:43	
	22:02	21:10	19:55	18:39	16:32	16:00		
13	05:06	05:57	06:55	07:35 (5)	07:52	07:54	08:44	
	22:01	21:08	19:53	8 07:43 (5)	18:37	16:30	16:00	
14	05:07	05:59	06:57	07:32 (5)	07:54	07:56	08:45	
	22:00	21:06	19:50	12 07:44 (5)	18:34	16:28	16:00	
15	05:08	06:01	06:59	07:31 (5)	07:56	08:46 (6)	07:58	08:46
	21:59	21:03	19:47	14 07:45 (5)	18:32	3 08:49 (6)	16:27	16:00
16	05:10	06:03	07:01	07:30 (5)	07:58	08:42 (6)	08:00	08:47
	21:58	21:01	19:45	16 07:46 (5)	18:29	10 08:52 (6)	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:40 (6)	08:02	08:47
	21:56	20:59	19:42	16 07:46 (5)	18:27	14 08:54 (6)	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:39 (6)	08:04	08:48
	21:55	20:57	19:40	14 07:46 (5)	18:25	16 08:55 (6)	16:22	16:00
19	05:14	06:08	07:06	07:33 (5)	08:04	08:38 (6)	08:06	08:49
	21:54	20:54	19:37	11 07:44 (5)	18:22	17 08:55 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:37 (6)	08:08	08:50
	21:52	20:52	19:35	8 07:43 (5)	18:20	18 08:55 (6)	16:19	16:01
21	05:17	06:12	07:10	07:37 (5)	08:08	08:37 (6)	08:10	08:50
	21:51	20:50	19:32	5 07:42 (5)	18:18	18 08:55 (6)	16:18	16:01
22	05:19	06:14	07:12	07:39 (5)	08:10	08:39 (6)	08:12	08:51
	21:49	20:47	19:30	1 07:40 (5)	18:15	17 08:56 (6)	16:16	16:02
23	05:20	06:16	07:14	08:12	08:41 (6)	08:13	08:51	
	21:48	20:45	19:27	18:13	14 08:55 (6)	16:15	16:02	
24	05:22	06:18	07:16	08:14	08:43 (6)	08:15	08:52	
	21:46	20:42	19:24	18:11	11 08:54 (6)	16:14	16:03	
25	05:24	06:20	07:17	07:16	07:45 (6)	08:17	08:52	
	21:45	20:40	19:22	17:08	8 07:53 (6)	16:12	16:04	
26	05:25	06:22	07:19	07:18	07:47 (6)	08:19	08:52	
	21:43	20:38	19:19	17:06	5 07:52 (6)	16:11	16:04	
27	05:27	06:23	07:21	07:20	07:49 (6)	08:21	08:53	
	21:41	20:35	19:17	17:04	1 07:50 (6)	16:10	16:05	
28	05:29	06:25	07:23	07:22	08:22	08:22	08:53	
	21:40	20:33	19:14	17:02	16:09	16:06		
29	05:30	06:27	07:00 (2)	07:25	07:24	08:24	08:53	
	21:38	20:30	7 07:07 (2)	19:12	17:00	16:08	16:07	
30	05:32	06:29	06:59 (2)	07:27	07:26	08:26	08:53	
	21:36	20:28	9 07:08 (2)	19:09	16:57	16:07	16:08	
31	05:34	06:31	06:59 (2)	07:28	07:28	08:53	08:53	
	21:34	20:25	9 07:08 (2)	16:55	16:55	16:09	16:09	
Potential sun hours	519	464	383	327	254	227		
Total, worst case		25	117	237				
Sun reduction		0,52	0,40	0,31				
Oper. time red.		1,00	1,00	1,00				
Wind dir. red.		0,98	1,00	0,93				
Total reduction		0,50	0,39	0,29				
Total, real		13	46	68				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:59 (6) 20:03	07:33 (5) 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	08:00 (6) 20:05	07:33 (5) 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	08:09 (6) 20:07	07:36 (5) 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	07:13 20:09	07:41 (5) 21:05	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	07:11 20:11	07:41 (5) 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 20:13	07:41 (5) 21:11	04:54 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 20:15	07:41 (5) 21:13	04:53 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 20:17	07:41 (5) 21:15	04:52 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 20:19	07:41 (5) 21:17	04:52 22:03
10	08:49 16:22	08:03 17:23	06:58 18:20	07:24 (1) 20:21	07:41 (5) 21:19	04:51 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	07:23 (1) 20:23	07:41 (5) 21:20	04:51 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	07:24 (1) 20:25	07:00 (2) 21:22	04:50 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	07:25 (1) 20:27	07:03 (2) 21:24	04:50 22:07
14	08:46 16:29	07:55 17:31	06:48 18:28	07:34 (1) 20:29	07:02 (2) 21:26	04:50 22:07
15	08:45 16:31	07:53 17:33	06:46 18:30	07:32 (1) 20:29	07:02 (2) 21:26	04:49 22:07
16	08:44 16:33	07:50 17:35	06:43 18:32	07:31 (1) 20:31	07:01 (2) 21:28	04:49 22:08
17	08:42 16:34	07:48 17:37	06:41 18:34	06:25 20:33	06:52 (2) 21:29	04:49 22:09
18	08:41 16:36	07:46 17:39	06:38 18:36	06:23 20:34	06:54 (2) 21:31	04:49 22:09
19	08:40 16:38	07:44 17:42	06:36 18:38	06:20 20:36	06:58 (2) 21:31	04:49 22:10
20	08:39 16:40	07:41 17:44	06:33 18:40	06:18 20:38	06:52 (2) 21:33	04:49 22:10
21	08:38 16:42	07:39 17:46	06:31 18:42	06:16 20:40	06:52 (2) 21:36	04:49 22:11
22	08:36 16:44	07:37 17:48	06:28 18:44	06:13 20:42	06:52 (2) 21:38	04:49 22:11
23	08:35 16:46	07:35 17:50	06:25 18:46	06:11 20:44	06:52 (2) 21:40	04:49 22:11
24	08:33 16:48	07:32 17:52	06:23 18:48	06:09 20:46	06:52 (2) 21:41	04:49 22:11
25	08:32 16:50	07:30 17:54	06:20 18:50	06:06 20:48	06:52 (2) 21:43	04:49 22:11
26	08:30 16:52	07:28 17:56	06:18 18:52	06:04 (5) 20:50	06:52 (2) 21:44	04:49 22:11
27	08:29 16:54	07:25 17:58	06:15 18:54	06:42 (5) 20:52	06:52 (2) 21:46	04:51 22:11
28	08:27 16:56	07:23 18:00	06:13 18:56	06:39 (5) 20:54	06:52 (2) 21:47	04:51 22:11
29	08:26 16:58	07:21 18:02	06:11 18:58	06:37 (5) 20:56	06:52 (2) 21:49	04:51 22:11
30	08:24 17:00	07:19 18:04	06:09 19:00	06:34 (5) 20:58	06:52 (2) 21:50	04:51 22:11
31	08:22 17:02	07:17 18:06	06:07 19:02	07:32 (5) 21:00	06:52 (2) 21:52	04:51 22:11
Potential sun hours	244	270	366	422	499	517
Total, worst case		124	177	65		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,93	0,98	0,98		
Total reduction		0,23	0,33	0,39		
Total, real		28	59	25		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: C - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	08:04 (1) 08:15 (1)	07:30 16:53	08:27 16:06	
2	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	08:03 (1) 08:15 (1)	07:32 16:51	08:29 16:05	
3	04:55 22:09	05:39 21:29	06:36 20:18	07:32 19:01	08:02 (1) 08:15 (1)	07:34 16:49	08:30 16:05	
4	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (1) 08:15 (1)	07:36 16:47	08:32 16:04	
5	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (1) 08:15 (1)	07:38 16:45	08:33 16:03	
6	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:06 (1) 08:14 (1)	07:40 16:43	08:35 16:03	
7	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:08 (1) 08:12 (1)	07:42 16:41	08:36 16:02	
8	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	4 08:12 (1)	07:44 16:39	08:38 16:02	
9	05:01 22:05	05:50 21:16	06:48 20:03	07:30 (5) 07:34 (5)	07:44 18:46	07:46 16:37	08:39 16:01	
10	05:02 22:04	05:52 21:14	06:49 20:00	07:27 (5) 07:37 (5)	07:46 18:44	07:48 16:35	08:40 16:01	
11	05:03 22:03	05:54 21:12	06:51 19:58	07:25 (5) 07:38 (5)	07:48 18:41	08:36 (6) 08:41 (6)	07:50 16:34	08:41 16:01
12	05:05 22:02	05:55 21:10	06:53 19:55	07:24 (5) 07:39 (5)	07:50 18:39	08:33 (6) 08:44 (6)	07:52 16:32	08:43 16:00
13	05:06 22:01	05:57 21:08	06:55 19:53	07:23 (5) 07:39 (5)	07:52 18:37	08:31 (6) 08:45 (6)	07:54 16:30	08:44 16:00
14	05:07 22:00	05:59 21:06	06:57 19:50	07:24 (5) 07:38 (5)	07:54 18:34	08:30 (6) 08:46 (6)	07:56 16:28	08:45 16:00
15	05:09 21:59	06:01 21:03	06:59 19:47	07:26 (5) 07:38 (5)	07:56 18:32	08:29 (6) 08:46 (6)	07:58 16:27	08:46 16:00
16	05:10 21:58	06:03 21:01	07:01 19:45	07:28 (5) 07:37 (5)	07:58 18:29	08:28 (6) 08:47 (6)	08:00 16:25	08:47 16:00
17	05:11 21:56	06:05 20:59	07:02 19:42	07:30 (5) 07:36 (5)	08:00 18:27	08:28 (6) 08:46 (6)	08:02 16:23	08:47 16:00
18	05:13 21:55	06:07 20:57	07:04 19:40	07:32 (5) 07:35 (5)	08:02 18:25	08:30 (6) 08:46 (6)	08:04 16:22	08:48 16:00
19	05:14 21:54	06:08 20:54	07:06 19:37	3 07:00 (2)	08:04 18:22	08:32 (6) 08:45 (6)	08:06 16:20	08:49 16:01
20	05:16 21:52	06:10 20:52	07:08 19:35	07:08 18:20	08:06 18:10	08:34 (6) 08:44 (6)	08:08 16:19	08:50 16:01
21	05:17 21:51	06:12 20:50	07:10 19:32	07:10 18:18	08:08 18:18	08:36 (6) 08:43 (6)	08:10 16:18	08:50 16:01
22	05:19 21:49	06:14 20:47	07:12 19:30	07:12 18:15	08:10 18:15	08:39 (6) 08:42 (6)	08:12 16:16	08:51 16:02
23	05:20 21:48	06:16 20:45	07:14 19:27	07:14 18:13	08:12 18:13	08:42 (6) 08:45 (6)	16:16 16:20	08:51 16:02
24	05:22 21:46	06:18 20:42	07:16 19:24	07:16 18:11	08:14 18:11	08:15 16:14	08:52 16:03	08:52 16:03
25	05:24 21:45	06:20 20:40	07:17 19:22	07:17 17:08	07:16 17:08	08:17 16:12	08:52 16:04	08:52 16:04
26	05:25 21:43	06:22 20:38	06:56 (2) 07:00 (2)	07:19 19:19	07:18 17:06	08:19 16:11	08:52 16:04	08:52 16:04
27	05:27 21:41	06:23 20:35	06:54 (2) 07:02 (2)	07:21 19:17	07:20 17:04	08:21 16:10	08:53 16:05	08:53 16:05
28	05:29 21:40	06:25 20:33	06:54 (2) 07:03 (2)	07:23 19:14	07:22 17:02	08:22 16:09	08:53 16:06	08:53 16:06
29	05:30 21:38	06:27 20:30	06:56 (2) 07:03 (2)	07:25 19:12	07:24 17:00	08:24 16:08	08:53 16:07	08:53 16:07
30	05:32 21:36	06:29 20:28	06:58 (2) 07:03 (2)	07:27 19:09	08:06 (1) 08:13 (1)	07:26 16:07	08:53 16:08	08:53 16:08
31	05:34 21:34	06:31 20:25	06:59 (2) 07:01 (2)	7 07:01 (2)	07:28 16:55	08:26 16:09	08:53 16:09	08:53 16:09
Potential sun hours	519	464	383	327		254	227	
Total, worst case			35	109	221			
Sun reduction			0,52	0,40	0,31			
Oper. time red.			1,00	1,00	1,00			
Wind dir. red.			0,97	1,00	0,95			
Total reduction			0,50	0,39	0,29			
Total, real			18	43	64			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June		
1	08:53	08:20	07:20	08:06 (6)	07:03	05:51	04:58	
	16:10	17:04	18:02	2 08:08 (6)	20:03	21:02	21:54	
2	08:53	08:19	07:18		07:00	05:48	04:57	
	16:11	17:06	18:04		20:05	21:03	21:56	
3	08:52	08:17	07:16		06:57	05:46	04:56	
	16:13	17:08	18:06		20:07	21:05	21:57	
4	08:52	08:15	07:13		06:55	05:44	04:55	
	16:14	17:10	18:08		20:09	21:07	21:58	
5	08:52	08:13	07:11	07:36 (1)	06:52	05:42	04:55	
	16:15	17:12	18:10	4 07:40 (1)	20:11	21:09	21:59	
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40	04:54	
	16:17	17:14	18:12	7 07:40 (1)	20:13	21:11	22:00	
7	08:51	08:09	07:06	07:30 (1)	06:47	05:38	04:53	
	16:18	17:16	18:14	10 07:40 (1)	20:15	21:13	22:01	
8	08:50	08:07	07:03	07:28 (1)	06:45	05:36	04:52	
	16:19	17:18	18:16	13 07:41 (1)	20:17	21:15	22:02	
9	08:50	08:05	07:01	07:27 (1)	06:42	05:34	04:52	
	16:21	17:21	18:18	13 07:40 (1)	20:19	21:17	22:03	
10	08:49	08:03	06:58	07:28 (1)	06:40	05:32	04:51	
	16:22	17:23	18:20	11 07:39 (1)	20:21	3 07:07 (2)	21:19	22:04
11	08:48	08:01	06:56	07:28 (1)	06:37	07:02 (2)	05:30	04:51
	16:24	17:25	18:22	10 07:38 (1)	20:23	5 07:07 (2)	21:20	22:05
12	08:47	07:59	06:53	07:31 (1)	06:35	07:00 (2)	05:28	04:50
	16:26	17:27	18:24	4 07:35 (1)	20:25	7 07:07 (2)	21:22	22:06
13	08:46	07:57	06:51		06:33	06:57 (2)	05:26	04:50
	16:27	17:29	18:26		20:27	9 07:06 (2)	21:24	22:07
14	08:46	07:55	06:48		06:30	06:58 (2)	05:24	04:50
	16:29	17:31	18:28		20:29	7 07:05 (2)	21:26	22:07
15	08:45	07:53	06:46		06:28		05:23	04:49
	16:31	17:33	18:30		20:31		21:28	22:08
16	08:44	07:50	06:43		06:25		05:21	04:49
	16:33	17:35	18:32		20:33		21:29	22:09
17	08:42	07:48	06:41		06:23		05:19	04:49
	16:34	17:37	18:34		20:34		21:31	22:09
18	08:41	07:46	06:38		06:20		05:17	04:49
	16:36	17:39	18:36		20:36		21:33	22:10
19	08:40	07:44	08:10 (6)	06:36	06:18		05:16	04:49
	16:38	17:42	5 08:15 (6)	18:38	20:38		21:35	22:10
20	08:39	07:41	08:08 (6)	06:33	06:16		05:14	04:49
	16:40	17:44	8 08:16 (6)	18:40	20:40		21:36	22:10
21	08:38	07:39	08:05 (6)	06:31	06:13		05:13	04:49
	16:42	17:46	11 08:16 (6)	18:42	20:42		21:38	22:11
22	08:36	07:37	08:03 (6)	06:28	06:11		05:11	04:49
	16:44	17:48	14 08:17 (6)	18:44	20:44		21:40	22:11
23	08:35	07:35	08:00 (6)	06:25	06:50 (5)	06:09	05:10	04:49
	16:46	17:50	16 08:16 (6)	18:46	3 06:53 (5)	20:46	21:41	22:11
24	08:33	07:32	07:59 (6)	06:23	06:47 (5)	06:06	05:08	04:50
	16:48	17:52	17 08:16 (6)	18:48	6 06:53 (5)	20:48	21:43	22:11
25	08:32	07:30	07:59 (6)	06:20	06:44 (5)	06:04	05:07	04:50
	16:50	17:54	16 08:15 (6)	18:50	9 06:53 (5)	20:50	21:44	22:11
26	08:30	07:28	08:00 (6)	06:18	06:42 (5)	06:02	05:05	04:51
	16:52	17:56	15 08:15 (6)	18:52	12 06:54 (5)	20:52	21:46	22:11
27	08:29	07:25	08:01 (6)	06:15	06:39 (5)	05:59	05:04	04:51
	16:54	17:58	13 08:14 (6)	18:54	14 06:53 (5)	20:54	21:47	22:11
28	08:27	07:23	08:02 (6)	06:13	06:38 (5)	05:57	05:03	04:52
	16:56	18:00	10 08:12 (6)	18:56	15 06:53 (5)	20:56	21:49	22:11
29	08:26			07:10	07:37 (5)	05:55	05:02	04:52
	16:58			19:58	14 07:51 (5)	20:58	21:50	22:10
30	08:24			07:08	07:39 (5)	05:53	05:00	04:53
	17:00			20:00	11 07:50 (5)	21:00	21:52	22:10
31	08:22			07:05	07:40 (5)		04:59	
	17:02			20:01	7 07:47 (5)		21:53	
Potential sun hours	244	270	366	422	499	517		
Total, worst case		125	165	31				
Sun reduction		0,24	0,34	0,39				
Oper. time red.		1,00	1,00	1,00				
Wind dir. red.		0,93	0,99	0,98				
Total reduction		0,23	0,34	0,38				
Total, real		28	55	12				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:36	06:33	07:01 (2)	07:29	07:30	08:27	
	22:10	21:32	20:23	5 07:06 (2)	19:07	16:53	16:06	
2	04:54	05:37	06:35	07:03 (2)	07:31	08:08 (1)	07:32	08:29
	22:09	21:30	20:20	3 07:06 (2)	19:04	8 08:16 (1)	16:51	16:05
3	04:55	05:39	06:36	07:32	07:32	08:06 (1)	07:34	08:30
	22:09	21:29	20:18	19:01	11 08:17 (1)	16:49	16:05	
4	04:56	05:41	06:38	07:34	07:34	08:05 (1)	07:36	08:32
	22:08	21:27	20:15	18:59	13 08:18 (1)	16:47	16:04	
5	04:57	05:43	06:40	07:36	08:05 (1)	07:38	08:33	
	22:08	21:25	20:13	18:56	13 08:18 (1)	16:45	16:03	
6	04:58	05:45	06:42	07:38	08:06 (1)	07:40	08:35	
	22:07	21:23	20:10	18:54	11 08:17 (1)	16:43	16:03	
7	04:59	05:46	06:44	07:40	08:08 (1)	07:42	08:36	
	22:06	21:21	20:08	18:51	9 08:17 (1)	16:41	16:02	
8	05:00	05:48	06:46	07:42	08:10 (1)	07:44	08:38	
	22:06	21:18	20:05	18:49	6 08:16 (1)	16:39	16:02	
9	05:01	05:50	06:48	07:44	08:12 (1)	07:46	08:39	
	22:05	21:16	20:03	18:46	2 08:14 (1)	16:37	16:01	
10	05:02	05:52	06:49	07:46	07:46	07:48	08:40	
	22:04	21:14	20:00	18:44	16:35	16:01		
11	05:03	05:54	06:51	07:48	07:50	08:41		
	22:03	21:12	19:58	18:41	16:34	16:01		
12	05:05	05:55	06:53	07:33 (5)	07:50	07:52	08:43	
	22:02	21:10	19:55	6 07:39 (5)	18:39	16:32	16:00	
13	05:06	05:57	06:55	07:30 (5)	07:52	08:37 (6)	07:54	08:44
	22:01	21:08	19:53	11 07:41 (5)	18:37	7 08:44 (6)	16:30	16:00
14	05:07	05:59	06:57	07:28 (5)	07:54	08:34 (6)	07:56	08:45
	22:00	21:06	19:50	13 07:41 (5)	18:34	12 08:46 (6)	16:28	16:00
15	05:09	06:01	06:59	07:27 (5)	07:56	08:33 (6)	07:58	08:46
	21:59	21:03	19:47	15 07:42 (5)	18:32	14 08:47 (6)	16:27	16:00
16	05:10	06:03	07:01	07:28 (5)	07:58	08:31 (6)	08:00	08:47
	21:58	21:01	19:45	14 07:42 (5)	18:29	17 08:48 (6)	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:31 (6)	08:02	08:47
	21:56	20:59	19:42	12 07:42 (5)	18:27	17 08:48 (6)	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:30 (6)	08:04	08:48
	21:55	20:57	19:40	10 07:42 (5)	18:25	18 08:48 (6)	16:22	16:00
19	05:14	06:08	07:06	07:33 (5)	08:04	08:32 (6)	08:06	08:49
	21:54	20:54	19:37	7 07:40 (5)	18:22	15 08:47 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:34 (6)	08:08	08:50
	21:52	20:52	19:35	4 07:39 (5)	18:20	13 08:47 (6)	16:19	16:01
21	05:17	06:12	07:10	08:08	08:36 (6)	08:10	08:50	
	21:51	20:50	19:32	18:18	10 08:46 (6)	16:18	16:01	
22	05:19	06:14	07:12	08:10	08:39 (6)	08:12	08:51	
	21:49	20:47	19:30	18:15	7 08:46 (6)	16:16	16:02	
23	05:20	06:16	07:14	08:12	08:41 (6)	08:13	08:51	
	21:48	20:45	19:27	18:13	3 08:44 (6)	16:15	16:02	
24	05:22	06:18	07:16	08:14	08:15	08:15	08:52	
	21:46	20:42	19:24	18:11	16:14	16:03		
25	05:24	06:20	07:17	07:16	08:17	08:17	08:52	
	21:45	20:40	19:22	17:08	16:12	16:04		
26	05:25	06:22	07:19	07:18	08:19	08:19	08:52	
	21:43	20:38	19:19	17:06	16:11	16:04		
27	05:27	06:23	07:21	07:20	08:21	08:21	08:53	
	21:41	20:35	19:17	17:04	16:10	16:05		
28	05:29	06:25	07:23	07:22	08:22	08:22	08:53	
	21:40	20:33	19:14	17:02	16:09	16:06		
29	05:30	06:27	06:59 (2)	07:25	07:24	08:24	08:53	
	21:38	20:30	7 07:06 (2)	19:12	17:00	16:08	16:07	
30	05:32	06:29	06:58 (2)	07:27	07:26	08:26	08:53	
	21:36	20:28	9 07:07 (2)	19:09	16:57	16:07	16:08	
31	05:34	06:31	06:59 (2)	07:28	07:28	08:27	08:53	
	21:34	20:25	7 07:06 (2)	16:55	16:09	16:09		
Potential sun hours	519	464	383	327	254	227		
Total, worst case		23	100	206				
Sun reduction		0,52	0,40	0,31				
Oper. time red.		1,00	1,00	1,00				
Wind dir. red.		0,98	1,00	0,95				
Total reduction		0,50	0,39	0,29				
Total, real		12	39	60				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:58 (6) 20:03	07:03 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	08:00 (6) 08:05 (6)	07:00 20:05	05:48 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:36 (1)	06:50 20:13	05:40 21:11
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 07:37 (1)	06:47 20:15	05:38 21:13
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 07:38 (1)	06:45 20:17	05:36 21:15
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 07:37 (1)	06:42 20:19	05:34 21:17
10	08:49 16:22	08:03 17:23	06:58 18:20	07:25 (1) 07:37 (1)	06:40 20:21	05:32 21:19
11	08:48 16:24	08:01 17:25	06:56 18:22	07:25 (1) 07:36 (1)	06:37 20:23	05:30 21:20
12	08:47 16:26	07:59 17:27	06:53 18:24	07:26 (1) 07:35 (1)	06:35 20:25	05:28 21:22
13	08:46 16:27	07:57 17:29	06:51 18:26	07:29 (1) 07:31 (1)	06:33 20:27	05:26 21:24
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	06:58 (2) 07:04 (2)	05:24 21:26
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	06:33 08:08 (6) 08:10 (6)	06:16 20:40	05:14 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	06:31 08:05 (6) 08:11 (6)	06:13 20:42	05:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	06:28 08:03 (6) 08:12 (6)	06:11 20:44	05:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	06:25 08:00 (6) 08:12 (6)	06:09 20:46	05:10 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	06:23 07:58 (6) 08:13 (6)	06:06 06:47 (5) 06:51 (5)	05:08 20:48	04:50 22:11
25	08:32 16:50	07:30 17:54	06:20 07:55 (6) 08:12 (6)	06:04 06:44 (5) 06:51 (5)	05:07 20:50	04:50 22:11
26	08:30 16:52	07:28 17:56	06:18 07:55 (6) 08:12 (6)	06:02 06:42 (5) 06:52 (5)	05:05 20:52	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 07:56 (6) 08:12 (6)	05:59 06:39 (5) 06:51 (5)	05:04 20:54	04:51 22:11
28	08:27 16:56	07:23 18:00	06:13 07:56 (6) 08:10 (6)	05:57 06:37 (5) 06:51 (5)	05:03 20:56	04:52 22:11
29	08:26 16:58	07:21 18:02	06:11 07:10 19:58	05:55 07:36 (5) 07:50 (5)	05:02 20:58	04:52 22:10
30	08:24 17:00	07:19 18:03	06:08 07:08 20:00	05:53 07:37 (5) 07:49 (5)	05:00 21:00	04:53 22:10
31	08:22 17:02	07:17 18:06	06:05 07:05 20:01	05:51 07:38 (5) 07:46 (5)	04:59 21:53	04:53 22:10
Potential sun hours	244	270	366	422	499	517
Total, worst case		108	163	28		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,94	0,99	0,98		
Total reduction		0,23	0,33	0,38		
Total, real		25	55	11		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:36	06:33	07:01 (2)	07:29	08:06 (1)	07:30	08:27
	22:10	21:32	20:23	5 07:06 (2)	19:07	7 08:13 (1)	16:53	16:06
2	04:54	05:37	06:35	07:03 (2)	07:31	08:04 (1)	07:32	08:29
	22:09	21:30	20:20	2 07:05 (2)	19:04	10 08:14 (1)	16:51	16:05
3	04:55	05:39	06:36		07:32	08:03 (1)	07:34	08:30
	22:09	21:29	20:18		19:01	12 08:15 (1)	16:49	16:05
4	04:56	05:41	06:38		07:34	08:02 (1)	07:36	08:32
	22:08	21:27	20:15		18:59	13 08:15 (1)	16:47	16:04
5	04:57	05:43	06:40		07:36	08:04 (1)	07:38	08:34
	22:08	21:25	20:13		18:56	11 08:15 (1)	16:45	16:03
6	04:58	05:45	06:42		07:38	08:06 (1)	07:40	08:35
	22:07	21:23	20:10		18:54	8 08:14 (1)	16:43	16:03
7	04:59	05:46	06:44		07:40	08:08 (1)	07:42	08:36
	22:06	21:21	20:08		18:51	5 08:13 (1)	16:41	16:02
8	05:00	05:48	06:46		07:42	08:10 (1)	07:44	08:38
	22:06	21:18	20:05		18:49	1 08:11 (1)	16:39	16:02
9	05:01	05:50	06:48		07:44		07:46	08:39
	22:05	21:16	20:03		18:46		16:37	16:01
10	05:02	05:52	06:49		07:46		07:48	08:40
	22:04	21:14	20:00		18:44		16:35	16:01
11	05:03	05:54	06:51		07:48		07:50	08:41
	22:03	21:12	19:58		18:41		16:34	16:01
12	05:05	05:55	06:53	07:30 (5)	07:50	08:33 (6)	07:52	08:43
	22:02	21:10	19:55	8 07:38 (5)	18:39	8 08:41 (6)	16:32	16:00
13	05:06	05:57	06:55	07:28 (5)	07:52	08:30 (6)	07:54	08:44
	22:01	21:08	19:53	12 07:40 (5)	18:37	13 08:43 (6)	16:30	16:00
14	05:07	05:59	06:57	07:26 (5)	07:54	08:29 (6)	07:56	08:45
	22:00	21:06	19:50	14 07:40 (5)	18:34	15 08:44 (6)	16:28	16:00
15	05:09	06:01	06:59	07:26 (5)	07:56	08:28 (6)	07:58	08:46
	21:59	21:03	19:47	14 07:40 (5)	18:32	16 08:44 (6)	16:27	16:00
16	05:10	06:03	07:01	07:28 (5)	07:58	08:27 (6)	08:00	08:47
	21:58	21:01	19:45	12 07:40 (5)	18:29	17 08:44 (6)	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:28 (6)	08:02	08:47
	21:56	20:59	19:42	10 07:40 (5)	18:27	16 08:44 (6)	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:30 (6)	08:04	08:48
	21:55	20:57	19:40	7 07:39 (5)	18:25	14 08:44 (6)	16:22	16:00
19	05:14	06:08	07:06	07:33 (5)	08:04	08:32 (6)	08:06	08:49
	21:54	20:54	19:37	4 07:37 (5)	18:22	11 08:43 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:34 (6)	08:08	08:50
	21:52	20:52	19:35	1 07:36 (5)	18:20	8 08:42 (6)	16:19	16:01
21	05:17	06:12	07:10		08:08	08:36 (6)	08:10	08:50
	21:51	20:50	19:32		18:18	5 08:41 (6)	16:18	16:01
22	05:19	06:14	07:12		08:10	08:39 (6)	08:12	08:51
	21:49	20:47	19:30		18:15	1 08:40 (6)	16:16	16:02
23	05:20	06:16	07:14		08:12		08:13	08:51
	21:48	20:45	19:27		18:13		16:15	16:02
24	05:22	06:18	07:16		08:14		08:15	08:52
	21:46	20:42	19:24		18:11		16:14	16:03
25	05:24	06:20	07:17		07:16		08:17	08:52
	21:45	20:40	19:22		17:08		16:12	16:04
26	05:25	06:22	07:19		07:18		08:19	08:52
	21:43	20:38	19:19		17:06		16:11	16:04
27	05:27	06:23	07:21		07:20		08:21	08:53
	21:41	20:35	19:17		17:04		16:10	16:05
28	05:29	06:25	07:23		07:22		08:22	08:53
	21:40	20:33	19:14		17:02		16:09	16:06
29	05:30	06:27	06:58 (2)	07:25	07:24		08:24	08:53
	21:38	20:30	7 07:05 (2)	19:12	17:00		16:08	16:07
30	05:32	06:29	06:58 (2)	07:27	07:26		08:26	08:53
	21:36	20:28	8 07:06 (2)	19:09	16:57		16:07	16:08
31	05:34	06:31	06:59 (2)		07:28			08:53
	21:34	20:25	7 07:06 (2)		16:55			16:09
Potential sun hours	519	464	383		327	254		227
Total, worst case			22		89		191	
Sun reduction			0,52		0,40		0,31	
Oper. time red.			1,00		1,00		1,00	
Wind dir. red.			0,98		1,00		0,95	
Total reduction			0,50		0,39		0,29	
Total, real			11		35		56	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:46 (6) 20:03	07:29 (5) 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (6) 20:05	07:29 (5) 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (6) 20:07	07:36 (5) 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (6) 20:09	07:36 (5) 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 20:11	07:36 (5) 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:37 (6) 20:13	07:36 (5) 21:11	04:54 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	07:38 (6) 20:15	07:36 (5) 21:13	04:53 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	07:41 (6) 20:17	07:36 (5) 21:15	04:52 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:42 (6) 20:19	07:36 (5) 21:17	04:52 22:03
10	08:49 16:23	08:03 17:23	06:58 18:20	07:43 (6) 20:21	07:36 (5) 21:19	04:51 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (1) 20:23	07:02 (2) 21:20	04:51 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	07:18 (1) 20:25	07:00 (2) 21:22	04:50 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	07:15 (1) 20:27	06:57 (2) 21:24	04:50 22:07
14	08:46 16:29	07:55 17:31	06:48 18:28	07:13 (1) 20:29	06:55 (2) 21:26	04:50 22:07
15	08:45 16:31	07:53 17:33	06:46 18:30	07:11 (1) 20:31	06:55 (2) 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	06:43 18:32	07:12 (1) 20:33	06:55 (2) 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	06:41 18:34	07:15 (1) 20:34	06:55 (2) 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	06:38 18:36	07:16 (1) 20:36	06:55 (2) 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	06:55 (2) 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	06:55 (2) 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	06:55 (2) 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	06:55 (2) 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	06:55 (2) 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	06:55 (2) 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	06:55 (2) 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	06:55 (2) 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 18:54	06:39 (5) 20:54	06:55 (2) 21:47	04:51 22:11
28	08:27 16:56	07:23 18:00	06:13 18:56	06:37 (5) 20:56	06:55 (2) 21:49	04:52 22:11
29	08:26 16:58	07:21 18:02	06:11 18:58	06:35 (5) 20:58	06:55 (2) 21:50	04:52 22:11
30	08:24 17:00	07:19 18:04	06:08 19:00	06:33 (5) 21:00	06:55 (2) 21:52	04:53 22:11
31	08:22 17:02	07:17 18:06	06:05 19:02	06:31 (5) 21:02	06:55 (2) 21:53	04:53 22:11
Potential sun hours	244	270	366	422	499	517
Total, worst case		2	148	32		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,96	0,98	0,99		
Total reduction		0,24	0,33	0,39		
Total, real		0	49	12		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December	
1	04:54	05:36	06:33	07:01 (2)	07:29	07:56 (1)	08:27
	22:10	21:32	20:23	19:07	18:02 (1)	16:53	16:06
2	04:54	05:37	06:35	07:02 (2)	07:31	07:58 (1)	08:29
	22:09	21:30	20:20	19:04	18:01 (1)	16:51	16:05
3	04:55	05:39	06:36	07:33	07:33	07:34	08:31
	22:09	21:29	20:18	19:01	18:01	16:49	16:05
4	04:56	05:41	06:38	07:34	07:34	07:36	08:32
	22:08	21:27	20:15	18:59	18:01	16:47	16:04
5	04:57	05:43	06:40	07:36	07:36	07:38	08:34
	22:08	21:25	20:13	18:56	18:02	16:45	16:03
6	04:58	05:45	06:42	07:38	07:38	08:15 (6)	08:35
	22:07	21:23	20:10	18:54	18:02 (6)	16:43	16:03
7	04:59	05:46	06:44	07:40	07:40	08:13 (6)	08:36
	22:06	21:21	20:08	18:51	18:02 (6)	16:41	16:02
8	05:00	05:48	06:46	07:42	07:42	08:12 (6)	08:38
	22:06	21:18	20:05	18:49	18:02 (6)	16:39	16:02
9	05:01	05:50	06:48	07:44	07:44	08:12 (6)	08:39
	22:05	21:16	20:03	18:46	18:02 (6)	16:37	16:01
10	05:02	05:52	06:49	07:46	07:46	08:14 (6)	08:40
	22:04	21:14	20:00	18:44	18:02 (6)	16:35	16:01
11	05:03	05:54	06:51	07:48	07:48	08:16 (6)	08:41
	22:03	21:12	19:58	18:42	18:02 (6)	16:34	16:01
12	05:05	05:56	06:53	07:50	07:50	08:18 (6)	08:43
	22:02	21:10	19:55	18:39	18:02 (6)	16:32	16:00
13	05:06	05:57	06:55	07:52	07:52	08:20 (6)	08:44
	22:01	21:08	19:53	18:37	18:02 (6)	16:30	16:00
14	05:07	05:59	06:57	07:54	07:54	08:24 (6)	08:45
	22:00	21:06	19:50	18:34	18:02 (6)	16:28	16:00
15	05:09	06:01	06:59	07:56	07:56	08:26 (6)	08:46
	21:59	21:03	19:47	18:32	18:02 (6)	16:27	16:00
16	05:10	06:03	07:01	07:58	07:58	08:28 (6)	08:47
	21:58	21:01	19:45	18:29	18:02 (6)	16:25	16:00
17	05:11	06:05	07:02	08:00	08:00	08:30 (6)	08:47
	21:56	20:59	19:42	18:27	18:02 (6)	16:23	16:00
18	05:13	06:07	07:04	08:02	08:02	08:32 (6)	08:48
	21:55	20:57	19:40	18:25	18:02 (6)	16:22	16:00
19	05:14	06:09	07:06	08:04	08:04	08:34 (6)	08:49
	21:54	20:54	19:37	18:22	18:02 (6)	16:20	16:01
20	05:16	06:10	07:08	08:06	08:06	08:36 (6)	08:50
	21:52	20:52	19:35	18:20	18:02 (6)	16:19	16:01
21	05:17	06:12	07:10	08:08	08:08	08:38 (6)	08:50
	21:51	20:50	19:32	18:18	18:02 (6)	16:18	16:01
22	05:19	06:14	07:12	08:10	08:10	08:40 (6)	08:51
	21:49	20:47	19:30	18:15	18:02 (6)	16:16	16:02
23	05:20	06:16	07:14	08:12	08:12	08:42 (6)	08:51
	21:48	20:45	19:27	18:13	18:02 (6)	16:15	16:02
24	05:22	06:18	07:16	08:14	08:14	08:44 (6)	08:52
	21:46	20:42	19:24	18:11	18:02 (6)	16:14	16:03
25	05:24	06:20	07:17	08:16	08:16	08:46 (6)	08:52
	21:45	20:40	19:22	18:08	18:02 (6)	16:12	16:04
26	05:25	06:22	07:19	08:18	08:18	08:48 (6)	08:52
	21:43	20:38	19:19	18:06	18:02 (6)	16:11	16:04
27	05:27	06:23	07:21	07:54 (1)	07:20	08:21	08:53
	21:41	20:35	19:17	18:00 (1)	17:04	16:10	16:05
28	05:29	06:25	07:23	07:52 (1)	07:22	08:22	08:53
	21:40	20:33	19:14	18:02 (1)	17:02	16:09	16:06
29	05:30	06:27	06:56 (2)	07:25	07:52 (1)	07:24	08:53
	21:38	20:30	19:12	18:02 (1)	17:00	16:08	16:07
30	05:32	06:29	06:58 (2)	07:27	07:54 (1)	07:26	08:53
	21:36	20:28	19:09	18:02 (1)	16:57	16:07	16:08
31	05:34	06:31	06:59 (2)	07:28	07:28	08:28	08:53
	21:34	20:25	19:07	16:55	16:55	16:09	16:09
Potential sun hours	519	464	383	327	254	227	
Total, worst case		14		85		88	
Sun reduction		0,52		0,40		0,31	
Oper. time red.		1,00		1,00		1,00	
Wind dir. red.		0,98		0,99		0,97	
Total reduction		0,50		0,39		0,30	
Total, real		7		33		26	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
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Calculated:
2021.06.16 13:30/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: G - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (7)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for time intervals (08:53 to 17:02). Includes summary rows for Potential sun hours, Total, worst case, Sun reduction, Oper. time red., Wind dir. red., Total reduction, and Total, real.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: H - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June		
1	08:53 16:10	08:20 17:04	07:20 18:02	21 17:11 (5) 17:32 (5)	07:02 20:03	28 18:49 (2) 19:17 (2)	04:58 21:01	
2	08:53 16:11	08:19 17:06	16:29 (1) 16:33 (6)	07:18 18:04	20 17:12 (5) 17:32 (5)	07:00 20:05	29 18:48 (2) 19:17 (2)	04:57 21:03
3	08:52 16:13	08:17 17:08	16:28 (1) 16:35 (6)	07:15 18:06	20 17:11 (5) 17:31 (5)	06:57 20:07	29 18:47 (2) 19:17 (2)	04:56 21:05
4	08:52 16:14	08:15 17:10	16:27 (1) 16:37 (6)	07:13 18:08	20 17:12 (5) 17:31 (5)	06:55 20:09	30 18:46 (2) 19:17 (2)	04:55 21:07
5	08:52 16:15	08:13 17:12	16:26 (1) 16:40 (6)	07:11 18:10	16 17:13 (5) 17:29 (5)	06:52 20:11	30 18:47 (2) 19:17 (2)	04:54 21:09
6	08:51 16:16	08:11 17:14	16:26 (1) 16:42 (6)	07:08 18:12	14 17:14 (5) 17:28 (5)	06:50 20:13	30 18:46 (2) 19:16 (2)	04:54 21:11
7	08:51 16:18	08:09 17:16	16:26 (1) 16:45 (6)	07:06 18:14	9 17:16 (5) 17:25 (5)	06:47 20:15	29 18:47 (2) 19:16 (2)	04:53 21:13
8	08:50 16:19	08:07 17:18	16:26 (1) 16:44 (6)	07:03 18:16	9 06:45 20:17	28 06:45 19:14 (2)	29 18:46 (2) 21:15	04:52 22:02
9	08:49 16:21	08:05 17:20	16:27 (1) 16:44 (6)	07:01 18:18	9 06:42 20:19	27 18:47 (2) 19:14 (2)	29 05:34 21:17	04:52 22:03
10	08:49 16:22	08:03 17:23	16:26 (1) 16:41 (6)	06:58 18:20	9 06:40 20:21	25 18:47 (2) 19:12 (2)	29 05:32 21:18	04:51 22:04
11	08:48 16:24	08:01 17:25	16:27 (1) 16:40 (1)	06:56 18:22	9 06:37 20:23	22 18:49 (2) 19:11 (2)	29 05:30 21:20	04:51 22:05
12	08:47 16:26	07:59 17:27	16:29 (1) 16:39 (1)	06:53 18:24	9 06:35 20:25	22 18:50 (2) 19:09 (2)	29 05:28 21:22	04:50 22:06
13	08:46 16:27	07:57 17:29	16:32 (1) 16:37 (1)	06:51 18:26	9 06:32 20:27	15 18:52 (2) 19:07 (2)	29 05:26 21:24	04:50 22:07
14	08:45 16:29	07:55 17:31	06:48 18:28	9 06:30 20:29	9 18:55 (2) 19:04 (2)	29 05:24 21:26	29 04:49 22:07	
15	08:44 16:31	07:52 17:33	06:46 18:30	9 06:28 20:30	9 05:22 21:28	29 04:49 22:08		
16	08:43 16:32	07:50 17:35	06:43 18:32	9 06:25 20:32	9 05:21 21:29	29 04:49 22:08		
17	08:42 16:34	07:48 17:37	06:41 18:34	9 06:23 20:34	9 05:19 21:31	29 04:49 22:09		
18	08:41 16:36	07:46 17:39	06:38 18:36	9 06:20 20:36	9 05:17 21:33	29 04:49 22:09		
19	08:40 16:38	07:44 17:41	06:35 18:38	9 06:18 20:38	9 05:16 21:34	29 04:49 22:10		
20	08:39 16:40	07:41 17:43	06:33 18:40	9 06:15 20:40	9 05:14 21:36	29 04:49 22:10		
21	08:37 16:42	07:39 17:46	06:30 18:42	9 06:13 20:42	9 05:12 21:38	29 04:49 22:10		
22	08:36 16:44	07:37 17:48	06:28 18:44	9 06:11 20:44	9 05:11 21:39	29 04:49 22:11		
23	08:35 16:45	07:34 17:50	17:18 (5) 17:21 (5)	06:25 18:46	9 06:08 20:46	9 05:09 21:41	29 04:49 22:11	
24	08:33 16:47	07:32 17:52	17:16 (5) 17:23 (5)	06:23 18:48	9 06:06 20:48	9 05:08 21:43	29 04:50 22:11	
25	08:32 16:49	07:30 17:54	17:14 (5) 17:25 (5)	06:20 18:50	9 06:04 20:50	9 05:07 21:44	29 04:50 22:11	
26	08:30 16:51	07:27 17:56	17:13 (5) 17:28 (5)	06:18 18:52	9 06:02 20:52	9 05:05 21:46	29 04:50 22:11	
27	08:29 16:53	07:25 17:58	17:12 (5) 17:29 (5)	06:15 18:54	9 17:56 (2) 18:12 (2)	05:59 20:54	9 05:04 21:47	04:51 22:11
28	08:27 16:55	07:23 18:00	17:12 (5) 17:32 (5)	06:13 18:56	20 17:54 (2) 18:14 (2)	05:57 20:56	9 05:03 21:49	04:51 22:11
29	08:25 16:57	07:21 18:02	17:11 (5) 17:31 (5)	06:11 18:58	20 18:12 (2) 19:15 (2)	05:55 20:58	9 05:01 21:50	04:52 22:10
30	08:24 17:00	07:19 18:04	17:10 (5) 17:30 (5)	06:10 18:59	25 18:51 (2) 19:16 (2)	05:53 21:00	9 05:00 21:52	04:53 22:10
31	08:22 17:02	07:17 18:09	17:09 (5) 17:29 (5)	06:09 18:59	27 18:49 (2) 19:16 (2)	04:59 21:53	9 04:59 21:53	04:59 22:10
Potential sun hours	244	270	366	422	499	517		
Total, worst case		221	239	352				
Sun reduction		0,24	0,34	0,39				
Oper. time red.		1,00	1,00	1,00				
Wind dir. red.		0,85	0,96	1,00				
Total reduction		0,20	0,32	0,39				
Total, real		45	77	136				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December		
1	04:53	05:35	06:33	18:48 (2)	07:29	07:30	15:56 (1)	08:27
	22:10	21:32	20:23	19:10 (2)	19:06	16:53	16:11 (6)	16:06
2	04:54	05:37	06:34	18:46 (2)	07:30	07:32	15:55 (1)	08:29
	22:09	21:30	20:20	19:11 (2)	19:04	16:51	16:12 (6)	16:05
3	04:55	05:39	06:36	18:44 (2)	07:32	07:34	15:56 (1)	08:30
	22:09	21:28	20:18	19:11 (2)	19:01	16:49	16:14 (6)	16:04
4	04:56	05:41	06:38	18:43 (2)	07:34	07:36	15:56 (1)	08:32
	22:08	21:26	20:15	19:12 (2)	18:59	16:47	16:14 (6)	16:04
5	04:57	05:43	06:40	18:43 (2)	07:36	07:38	15:56 (1)	08:33
	22:08	21:24	20:13	19:12 (2)	18:56	16:45	16:12 (6)	16:03
6	04:58	05:44	06:42	18:42 (2)	07:38	17:55 (5)	15:56 (1)	08:35
	22:07	21:22	20:10	19:12 (2)	18:54	18:00 (5)	16:43	16:02
7	04:59	05:46	06:44	18:42 (2)	07:40	17:52 (5)	15:58 (1)	08:36
	22:06	21:20	20:08	19:12 (2)	18:51	18:03 (5)	16:41	16:02
8	05:00	05:48	06:46	18:41 (2)	07:42	17:49 (5)	15:58 (1)	08:38
	22:06	21:18	20:05	19:11 (2)	18:49	18:04 (5)	16:39	16:01
9	05:01	05:50	06:47	18:41 (2)	07:44	17:47 (5)	16:00 (1)	08:39
	22:05	21:16	20:03	19:11 (2)	18:46	18:04 (5)	16:37	16:01
10	05:02	05:52	06:49	18:41 (2)	07:46	17:47 (5)	16:03 (6)	08:40
	22:04	21:14	20:00	19:10 (2)	18:44	18:06 (5)	16:35	16:01
11	05:03	05:54	06:51	18:41 (2)	07:48	17:46 (5)	16:00 (1)	08:41
	22:03	21:12	19:58	19:10 (2)	18:41	18:06 (5)	16:33	16:00
12	05:04	05:55	06:53	18:41 (2)	07:50	17:46 (5)	15:58 (1)	08:42
	22:02	21:10	19:55	19:09 (2)	18:39	18:06 (5)	16:32	16:00
13	05:06	05:57	06:55	18:41 (2)	07:52	17:45 (5)	16:00 (1)	08:44
	22:01	21:08	19:52	19:07 (2)	18:36	18:06 (5)	16:30	16:00
14	05:07	05:59	06:57	18:42 (2)	07:54	17:45 (5)	15:58 (1)	08:45
	22:00	21:05	19:50	19:05 (2)	18:34	18:04 (5)	16:28	16:00
15	05:08	06:01	06:59	18:43 (2)	07:56	17:45 (5)	16:00 (1)	08:46
	21:59	21:03	19:47	19:04 (2)	18:32	18:01 (5)	16:27	16:00
16	05:10	06:03	07:00	18:45 (2)	07:57	17:46 (5)	16:00 (1)	08:47
	21:57	21:01	19:45	19:02 (2)	18:29	17:59 (5)	16:25	16:00
17	05:11	06:05	07:02	18:48 (2)	07:59	17:46 (5)	16:00 (1)	08:47
	21:56	20:59	19:42	18:58 (2)	18:27	17:56 (5)	16:23	16:00
18	05:13	06:06	07:04	18:41 (2)	08:01	17:48 (5)	16:00 (1)	08:48
	21:55	20:56	19:40	18:24	18:24	17:54 (5)	16:22	16:00
19	05:14	06:08	07:06	18:03	08:03	17:50 (5)	16:00 (1)	08:49
	21:54	20:54	19:37	18:22	18:22	17:51 (5)	16:20	16:01
20	05:16	06:10	07:08	18:05	08:05	17:46 (5)	16:00 (1)	08:50
	21:52	20:52	19:35	18:20	18:20	16:19	16:01	16:01
21	05:17	06:12	07:10	18:07	08:07	16:17	16:00 (1)	08:50
	21:51	20:49	19:32	18:17	18:17	16:17	16:01	16:01
22	05:19	06:14	07:12	18:09	08:09	16:16	16:00 (1)	08:51
	21:49	20:47	19:29	18:15	18:15	16:16	16:02	16:02
23	05:20	06:16	07:14	18:11	08:11	16:15	16:00 (1)	08:51
	21:48	20:45	19:27	18:13	18:13	16:15	16:02	16:02
24	05:22	06:18	07:15	18:13	08:13	16:15	16:00 (1)	08:52
	21:46	20:42	19:24	18:10	18:10	16:13	16:03	16:03
25	05:23	06:20	07:17	18:15	08:17	16:12	16:00 (1)	08:52
	21:45	20:40	19:22	17:08	17:08	16:12	16:03	16:03
26	05:25	06:21	07:19	17:17	08:19	16:11	16:00 (1)	08:52
	21:43	20:37	19:19	17:06	17:06	16:11	16:04	16:04
27	05:27	06:23	07:21	17:19	08:20	16:10	16:00 (1)	08:53
	21:41	20:35	19:17	17:04	17:04	16:10	16:05	16:05
28	05:28	06:25	07:23	17:21	08:22	16:09	16:00 (1)	08:53
	21:39	20:33	19:14	17:02	17:02	16:09	16:06	16:06
29	05:30	06:27	18:56 (2)	07:25	07:24	16:01 (1)	16:00 (1)	08:53
	21:38	20:30	19:05 (2)	19:11	16:59	16:07 (1)	16:08	16:07
30	05:32	06:29	18:52 (2)	07:27	07:26	15:58 (1)	16:07	08:53
	21:36	20:28	19:07 (2)	19:09	16:57	16:09 (1)	16:07	16:08
31	05:34	06:31	18:49 (2)	07:28	07:28	15:57 (1)	16:00 (1)	08:53
	21:34	20:25	19:09 (2)	16:55	16:55	16:10 (1)	16:09	16:09
Potential sun hours	519	464	383	327	254	227		
Total, worst case		44	435	223	118			
Sun reduction		0,52	0,40	0,31	0,16			
Oper. time red.		1,00	1,00	1,00	1,00			
Wind dir. red.		1,00	1,00	0,91	0,81			
Total reduction		0,51	0,39	0,27	0,12			
Total, real		22	169	61	15			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:30/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: I - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	07:27 (5) 07:36 (5)	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	07:25 (5) 07:34 (5)	05:48 21:03	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:28 (5) 07:32 (5)	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	07:34 16:49
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	07:38 (6) 07:42 (6)	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:36 16:47
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	07:36 (6) 07:43 (6)	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	07:38 16:45
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	07:33 (6) 07:42 (6)	05:40 21:11	04:54 22:04	04:58 21:23	05:45 21:23	06:42 20:10	07:38 18:54	07:40 16:43
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	07:31 (6) 07:42 (6)	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	07:42 16:41
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	07:28 (6) 07:41 (6)	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	07:44 16:39
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	07:29 (6) 07:39 (6)	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	07:31 (6) 07:37 (6)	05:32 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:46 18:44	07:48 16:35
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:32 (5) 07:38 (5)	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:42	07:50 16:34
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:00 (2) 07:02 (2)	05:28 21:22	04:50 22:06	05:05 22:02	05:56 21:10	06:53 19:55	07:50 18:39	07:52 16:32
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	06:57 (2) 07:01 (2)	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	07:13 (1) 07:16 (1)	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	07:10 (1) 07:16 (1)	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	07:08 (1) 07:16 (1)	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	07:05 (1) 07:15 (1)	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	07:58 18:27	08:02 16:24
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	07:06 (1) 07:12 (1)	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	07:12 (1) 07:18 (1)	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:06 16:20
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	07:14 (1) 07:20 (1)	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	07:15 (1) 07:21 (1)	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	07:16 (1) 07:22 (1)	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	07:23 (1) 07:29 (1)	05:09 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	07:24 (1) 07:30 (1)	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	07:25 (1) 07:31 (1)	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:14 18:06	08:17 16:12
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	07:32 (1) 07:38 (1)	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:18 18:04	08:19 16:11
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	07:39 (1) 07:45 (1)	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:20 18:04	08:21 16:10
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	07:40 (1) 07:46 (1)	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	07:22 18:04	08:22 16:09
29	08:26 16:58	07:20 17:58	06:10 18:58	05:55 20:58	07:41 (1) 07:47 (1)	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	07:24 18:04	08:24 16:07
30	08:24 17:00	07:18 18:00	06:07 19:00	05:53 21:00	07:48 (1) 07:54 (1)	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	07:26 17:04	08:26 16:07
31	08:22 17:02	07:15 18:01	06:05 19:01	05:51 20:51	07:51 (1) 07:57 (1)	04:59 21:53	05:34 21:34	06:31 20:25	07:28 20:16	07:28 16:55	07:28 16:55	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case			110	32				10				
Sun reduction			0,34	0,39				0,52		0,40		0,31
Oper. time red.			1,00	1,00				1,00		1,00		1,00
Wind dir. red.			0,98	0,99				0,97		1,00		0,97
Total reduction			0,34	0,39				0,50		0,39		0,30
Total, real			37	12				5		28		18

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 13:30/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	08:06 (6) 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	08:11 (6) 16:51	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:03 (6) 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 20:11	06:52 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (6) 16:45	08:34 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (6) 20:13	06:50 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:06 (6) 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (6) 20:15	06:47 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:08 (6) 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (6) 20:17	06:45 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	08:10 (6) 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 20:19	06:42 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	08:13 (6) 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	07:24 (6) 20:21	06:40 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:50 20:00	07:46 18:44	08:13 (6) 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	07:25 (6) 20:23	06:37 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:42	08:14 (6) 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	07:33 (6) 20:25	06:35 21:22	05:28 22:06	05:05 22:02	05:56 21:10	06:53 19:55	07:50 18:39	08:13 (6) 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	06:57 (2) 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	08:13 (6) 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	06:55 (2) 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	08:13 (6) 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	07:10 (1) 20:31	06:28 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:47	07:56 18:32	08:13 (6) 16:27	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	07:08 (1) 20:33	06:25 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:13 (6) 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	07:05 (1) 20:35	06:23 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:13 (6) 16:24	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	07:02 (1) 20:36	06:20 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:13 (6) 16:22	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	07:04 (1) 20:38	06:18 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:13 (6) 16:20	08:49 16:01
20	08:39 16:40	07:42 17:44	06:33 18:40	07:09 (1) 20:40	06:16 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:13 (6) 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	06:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:13 (6) 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	06:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:13 (6) 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	06:09 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 (6) 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	06:06 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:13 (6) 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	06:04 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:14 18:08	08:13 (6) 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	06:02 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	08:14 18:04	08:13 (6) 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:59 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:14 18:04	08:13 (6) 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:57 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	08:14 18:04	08:13 (6) 16:09	08:53 16:06
29	08:26 16:58	07:10 17:58	07:10 19:58	05:55 20:58	05:55 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	08:14 18:04	08:13 (6) 16:08	08:53 16:07
30	08:24 17:00	07:08 18:00	07:08 20:00	05:53 21:00	05:53 21:52	04:53 22:10	05:32 21:36	06:29 20:31	07:27 19:09	08:14 18:04	08:13 (6) 16:07	08:53 16:08
31	08:22 17:02	07:05 18:01	07:05 20:01	05:53 21:00	04:59 21:53	05:34 21:34	06:31 20:25	06:59 (2) 464	07:28 16:55	08:14 18:04	08:13 (6) 16:07	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case			79	8				8				
Sun reduction			0,34	0,39				0,52		0,40		0,31
Oper. time red.			1,00	1,00				1,00		1,00		1,00
Wind dir. red.			0,98	0,97				0,97		1,00		0,98
Total reduction			0,34	0,38				0,50		0,39		0,30
Total, real			27	3				4		11		16

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
 K. Donelaicio str. 55-2
 LT-44245 Kaunas
 +370 37 407548
 Raminta Survilė / r.survilė@infraplanas.lt
 Calculated:
 2021.06.16 13:30/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53	08:20	07:20	07:03	05:51	04:58	04:54	05:36	06:33	07:29	08:01 (6)	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:07	7 08:08 (6)	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:59 (6)	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	10 08:09 (6)	16:51	16:05
3	08:52	08:17	07:16	06:58	05:46	04:56	04:55	05:39	06:37	07:33	08:00 (6)	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	10 08:10 (6)	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	08:02 (6)	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	8 08:10 (6)	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:55	04:57	05:43	06:40	07:36	08:04 (6)	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	6 08:10 (6)	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:45	06:42	07:38	08:06 (6)	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	3 08:09 (6)	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	07:42	08:36
	16:18	17:16	18:14	2 07:33 (6)	20:15	21:13	22:01	21:21	20:08	18:51	07:42	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	07:44	08:38
	16:19	17:18	18:16	5 07:33 (6)	20:17	21:15	22:02	21:18	20:05	18:49	07:44	16:39	16:02
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	07:46	08:39
	16:21	17:21	18:18	7 07:32 (6)	20:19	21:17	22:03	21:16	20:03	18:46	07:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:50	07:46	07:48	07:48	08:40
	16:23	17:23	18:20	9 07:32 (6)	20:21	21:19	22:04	21:14	20:00	18:44	07:48	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	07:50	08:41
	16:24	17:25	18:22	11 07:31 (6)	20:23	21:20	22:05	21:12	19:58	18:42	07:50	16:34	16:01
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:56	06:53	07:50	07:52	07:52	08:43
	16:26	17:27	18:24	9 07:30 (6)	20:25	1 07:01 (2)	21:22	22:06	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:33	05:26	04:50	05:06	05:57	06:55	07:52	07:54	07:54	08:44
	16:27	17:29	18:26	1 07:25 (6)	20:27	2 06:59 (2)	21:24	22:07	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:50	05:07	05:59	06:57	07:54	07:56	07:56	08:45
	16:29	17:31	18:28	20:29	3 06:58 (2)	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:09	06:01	06:59	07:56	07:58	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:48	18:32	16:27	16:00	
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:00	08:47
	16:33	17:35	18:32	1 07:09 (1)	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:02	08:48
	16:34	17:37	18:34	4 07:09 (1)	20:35	21:31	22:09	21:56	20:59	19:42	18:27	16:24	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:04	08:48
	16:36	17:39	18:36	6 07:08 (1)	20:36	21:33	22:10	21:55	20:57	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:09	07:06	08:04	08:06	08:06	08:49
	16:38	17:42	18:38	8 07:08 (1)	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:42	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:08	08:50
	16:40	17:44	18:40	5 07:05 (1)	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:31	06:13	05:13	04:49	05:17	06:12	07:10	08:08	08:10	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:18	17:04	16:18	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:30	18:15	17:01	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:50	05:20	06:16	07:14	08:12	08:13	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	2 07:48 (1)	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:16	08:14	08:14	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	7 07:51 (1)	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:15	08:16	08:17	08:52
	16:50	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	7 07:52 (1)	17:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:51	05:25	06:22	07:19	08:17	08:18	08:19	08:52
	16:52	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	5 07:51 (1)	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:20	08:21	08:53
	16:54	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	2 07:50 (1)	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	08:21	08:22	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	07:22	17:02	16:09	16:06
29	08:26	07:10	05:55	05:39	05:02	04:52	05:30	06:27	07:25	08:23	08:24	08:24	08:53
	16:58	17:58	18:54	20:58	21:50	22:10	21:38	20:30	3 06:59 (2)	19:12	17:00	16:08	16:07
30	08:24	07:08	05:53	05:37	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:26	08:53
	17:00	18:00	19:00	21:00	21:52	22:10	21:36	20:28	2 07:00 (2)	19:09	16:57	16:07	16:08
31	08:22	07:05	05:49	05:33	04:59	05:34	06:31	07:28	08:26	09:24	10:22	11:20	12:18
	17:02	18:01	19:00	21:00	21:53	21:34	20:25	1 07:00 (2)	16:55	07:28	16:55	16:09	16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227	
Total, worst case			68	6				6					
Sun reduction			0,34	0,39				0,52	0,40		0,31		
Oper. time red.			1,00	1,00				1,00	1,00		1,00		
Wind dir. red.			0,99	0,97				0,97	1,00		0,98		
Total reduction			0,34	0,38				0,50	0,39		0,30		
Total, real			23	2				3	9		13		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:30/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:56 (6) 08:06 (6)	07:30 16:53
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:58 (6) 08:06 (6)	07:32 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:37 20:18	07:33 19:01	08:00 (6) 08:06 (6)	07:34 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 08:06 (6)	07:36 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (6) 08:05 (6)	07:38 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:50 20:00	07:46 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:42	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:56 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:48	07:56 18:32	07:58 16:27	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:35	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:24	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:50 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:16 18:08	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	08:18 18:09	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:19 18:04	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	08:22 18:02	08:22 16:09	08:53 16:06
29	08:26 16:58	07:10 17:58	07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	08:24 18:00	08:24 16:07	08:53 16:07
30	08:24 17:00	07:08 17:00	07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:31	07:27 19:09	08:26 18:04	08:26 16:07	08:53 16:08
31	08:22 17:02	07:05 20:01	07:05 20:01	05:53 21:53	05:00 21:53	04:59 21:34	05:34 20:25	06:28 20:25	07:28 16:55	08:04 (6) 327	07:28 16:55	08:53 16:09
Potential sun hours	244	270	366	422	499	517	464	383	25	29	254	227
Total, worst case			57	4					0,40	0,31		
Sun reduction			0,34	0,39					1,00	1,00		
Oper. time red.			1,00	1,00					0,97	0,99		
Wind dir. red.			0,99	0,97					0,39	0,30		
Total reduction			0,34	0,38					0,50	0,39		
Total, real			19	2			2	10	9			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:30/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66Shadow receptor: M - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

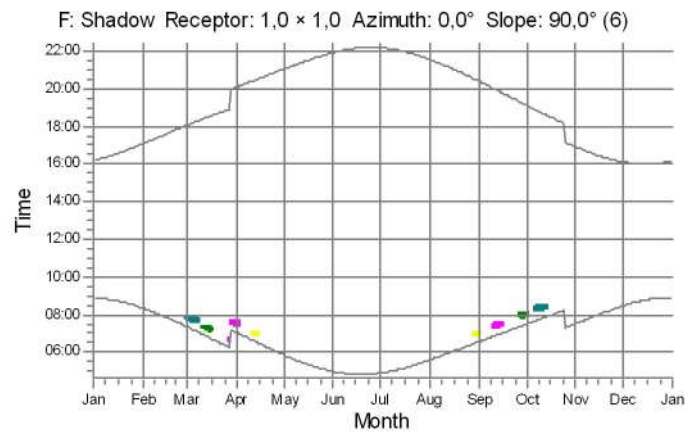
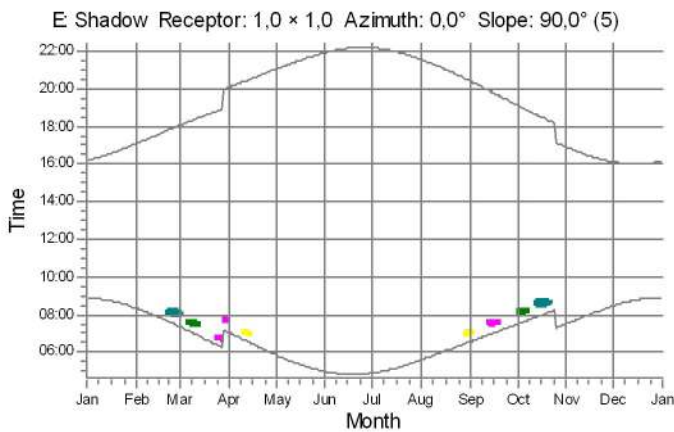
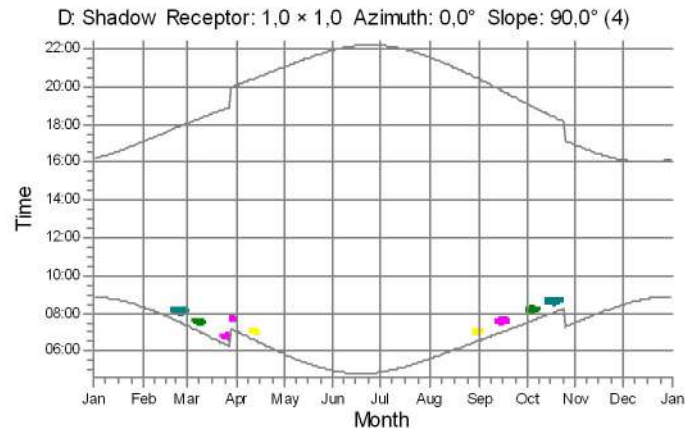
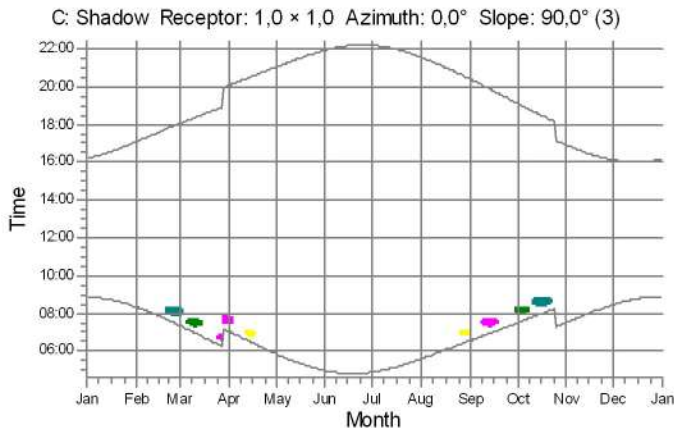
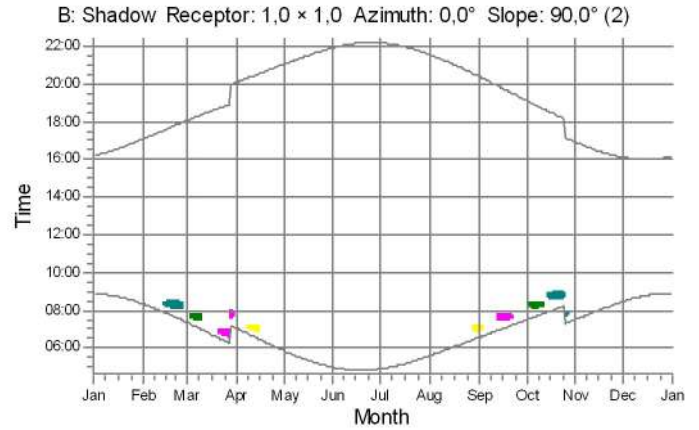
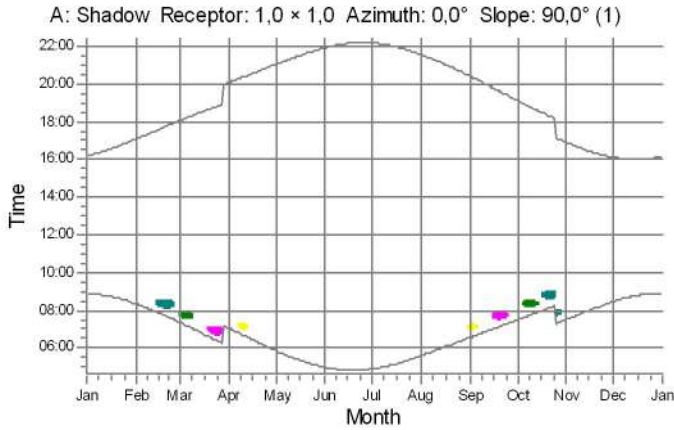
	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:51	04:58	04:54	05:36	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:55	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:24	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:02
9	08:49	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:01
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:55	06:53	07:50	07:52	08:42
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	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:33	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:34	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:13	04:49	05:17	06:12	07:10	08:07	08:10	08:50
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22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:39	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
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	16:56	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:01	16:09	16:06
29	08:25		07:10	05:55	05:02	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E66

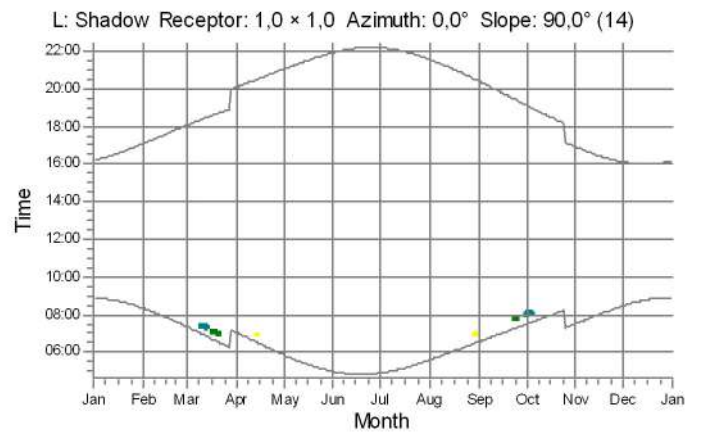
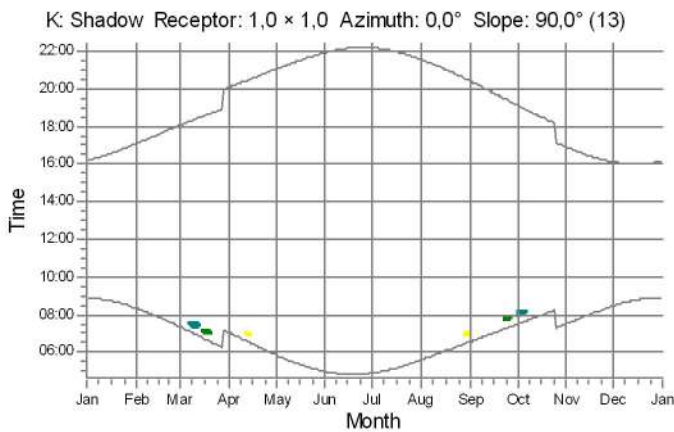
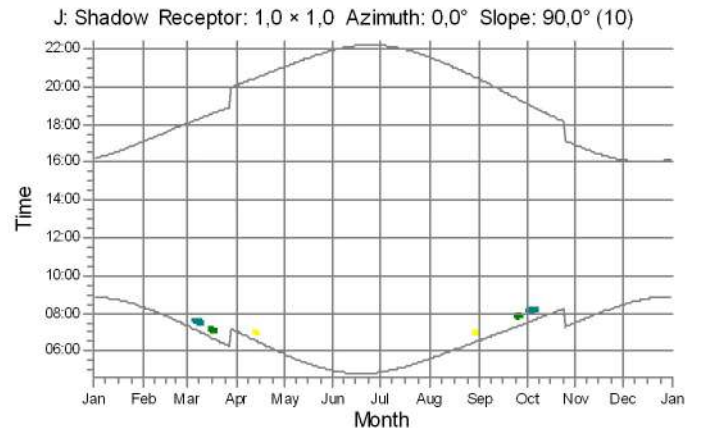
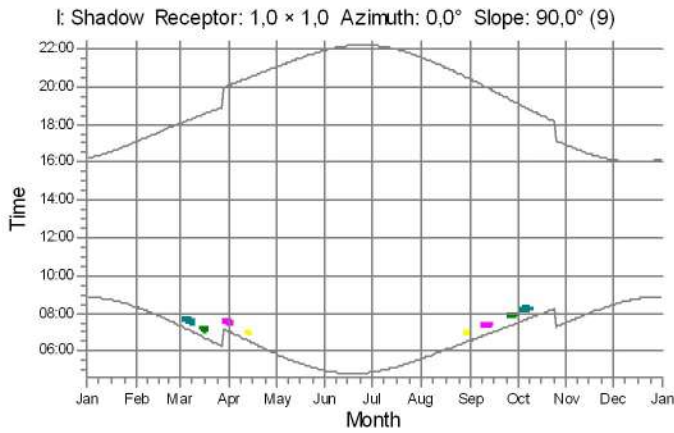
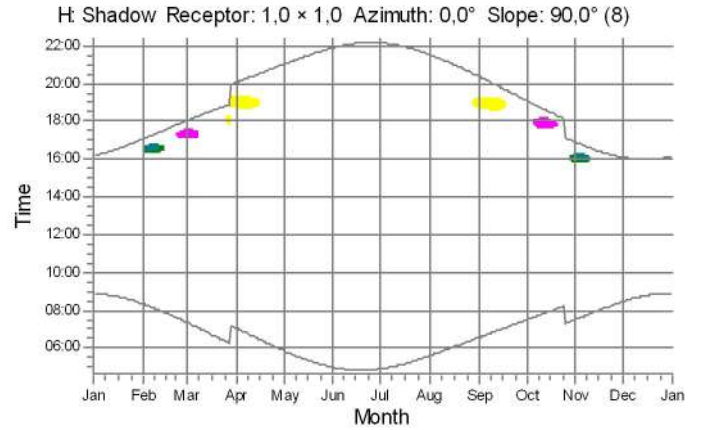
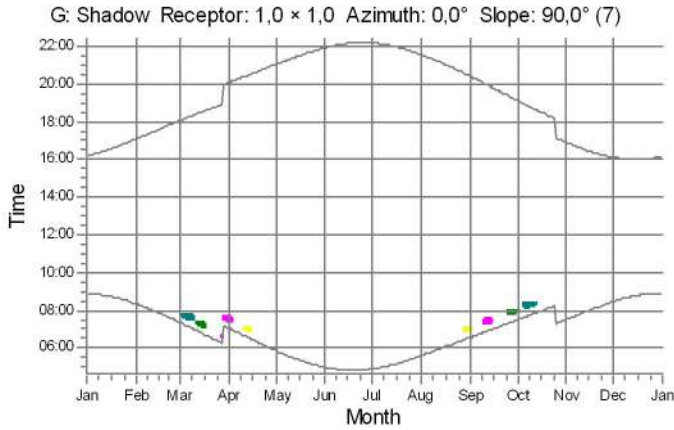


WTGs

- 1: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)
- 2: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)
- 5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E66



WTGs

- 1: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)
- 2: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)
- 5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas

K. Donelaicio str. 55-2

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+370 37 407548

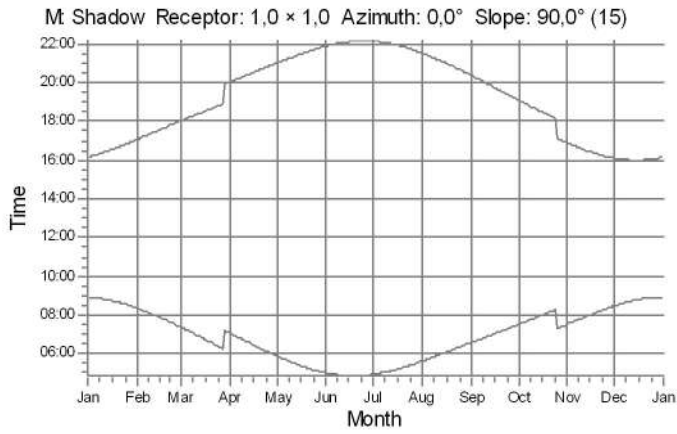
Raminta Survilè / r.surville@infraplanas.lt

Calculated:

2021.06.16 13:30/3.4.415

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E66



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 13:30/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E66WTG: 1 - ENERCON E-66/20.70 2000 70.0 I-! hub: 85,0 m (TOT: 120,0 m) (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and multiple rows for days, showing sunrise, sunset, and shadow data for each day.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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+370 37 407548
Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 13:30/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E66WTG: 2 - ENERCON E-66/20.70 2000 70.0 !-I hub: 85,0 m (TOT: 120,0 m) (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02 18:49-19:17/28	05:50	04:58	04:53	05:35	06:33 18:48-19:10/22	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23 07:01-07:11/10	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00 18:48-19:17/29	05:48	04:57	04:54	05:37	06:35 18:46-19:11/25	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20 07:03-07:12/9	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57 18:47-19:17/30	05:46	04:56	04:55	05:39	06:36 18:44-19:11/27	07:32	07:34	08:30
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18 07:05-07:12/7	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55 18:46-19:17/31	05:44	04:55	04:56	05:41	06:38 18:43-19:12/29	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15 07:06-07:11/5	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52 18:47-19:17/30	05:42	04:54	04:57	05:43	06:40 18:43-19:12/29	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:24	20:13 07:08-07:11/3	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50 18:46-19:16/30	05:40	04:54	04:58	05:44	06:42 18:42-19:12/30	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47 18:47-19:16/29	05:38	04:53	04:59	05:46	06:44 18:42-19:12/30	07:40	07:42	08:36
	16:18	17:16	18:14	20:15 07:12-07:14/2	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45 18:46-19:14/28	05:36	04:52	05:00	05:48	06:46 18:41-19:11/30	07:42	07:44	08:38
	16:19	17:18	18:16	20:17 07:09-07:14/5	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42 18:47-19:14/27	05:34	04:52	05:01	05:50	06:48 18:41-19:11/30	07:44	07:46	08:39
	16:21	17:20	18:18	20:19 07:07-07:14/7	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40 18:47-19:12/25	05:32	04:51	05:02	05:52	06:49 18:41-19:10/29	07:46	07:48	08:40
	16:22	17:23	18:20	20:21 07:04-07:13/9	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37 18:49-19:11/22	05:30	04:51	05:03	05:54	06:51 18:41-19:10/29	07:48	07:50	08:41
	16:24	17:25	18:22	20:23 07:02-07:12/10	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35 07:00-07:09/9	05:28	04:50	05:04	05:55	06:53 18:41-19:09/28	07:50	07:52	08:42
	16:26	17:27	18:24	20:25 18:50-19:09/19	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32 06:57-07:07/10	05:26	04:50	05:06	05:57	06:55 18:41-19:07/26	07:52	07:54	08:44
	16:27	17:29	18:26	20:27 18:52-19:07/15	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30 06:55-07:06/11	05:24	04:49	05:07	05:59	06:57 18:42-19:05/23	07:54	07:56	08:45
	16:29	17:31	18:28	20:29 18:55-19:04/9	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28 06:52-07:01/9	05:23	04:49	05:08	06:01	06:59 18:43-19:04/21	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25 06:52-07:00/8	05:21	04:49	05:10	06:03	07:01 18:45-19:02/17	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23 06:54-06:58/4	05:19	04:49	05:11	06:05	07:02 18:48-18:58/10	08:00	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:39	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	07:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:04
26	08:30	07:27	06:18 18:00-18:09/9	06:02	05:05	04:50	05:25	06:21 06:56-07:00/4	07:19	07:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15 17:56-18:12/16	05:59	05:04	04:51	05:27	06:23 06:54-07:02/8	07:21	07:19	08:20	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13 17:54-18:14/20	05:57	05:03	04:51	05:29	06:25 06:54-07:03/9	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	17:02	16:09	16:06
29	08:25		07:10 18:52-19:15/23	05:55	05:01	04:52	05:30	06:27 06:56-07:07/11	07:25	07:24	08:24	08:53
	16:58		19:57	20:58	21:50	22:10	21:38	20:30 18:56-19:05/9	19:12	16:59	16:08	16:07
30	08:24		07:08 18:51-19:16/25	05:53	05:00	04:53	05:32	06:29 06:58-07:08/10	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28 18:52-19:07/15	19:09	16:57	16:07	16:08
31	08:22		07:05 18:49-19:16/27	05:51	04:59		05:34	06:31 06:59-07:09/10		07:28	08:28	08:53
	17:02		20:01	21:00	21:53		21:34	20:25 18:49-19:09/20		16:55	16:05	16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	120	436	0	0	0	96	469	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:30/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E66WTG: 3 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (7)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:22	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
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	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	16:59	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 13:30/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E66WTG: 4 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:30	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:02	16:09	16:06
29	08:25		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 13:30/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E66WTG: 5 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains sun rise and set times and a numerical value representing minutes with flicker. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 13:30/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E66WTG: 6 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (10)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (e.g., 08:53 | 17:04) and a numerical value representing shadow minutes. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

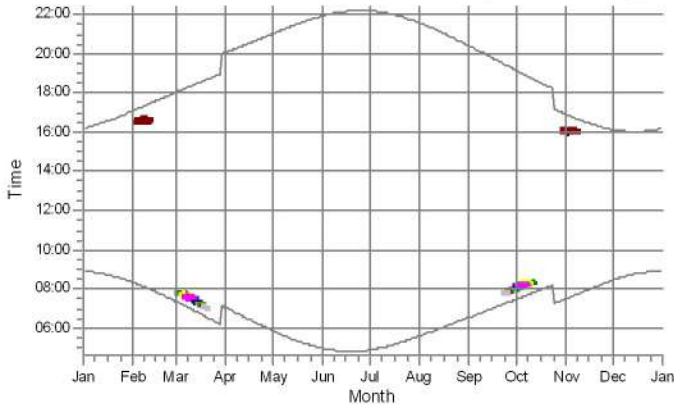
Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

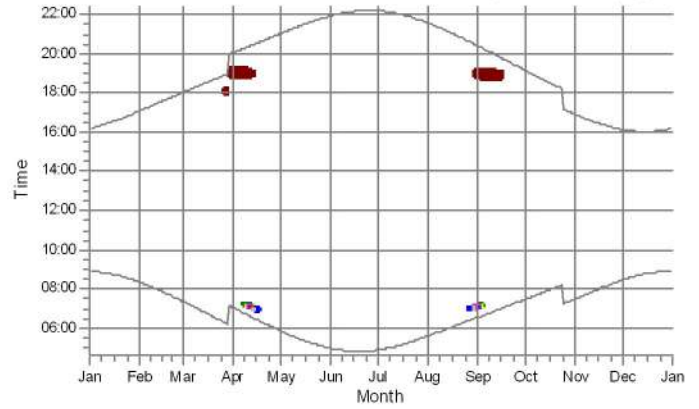
SHADOW - Calendar per WTG, graphical

Calculation: Planuojamos Enercon E66

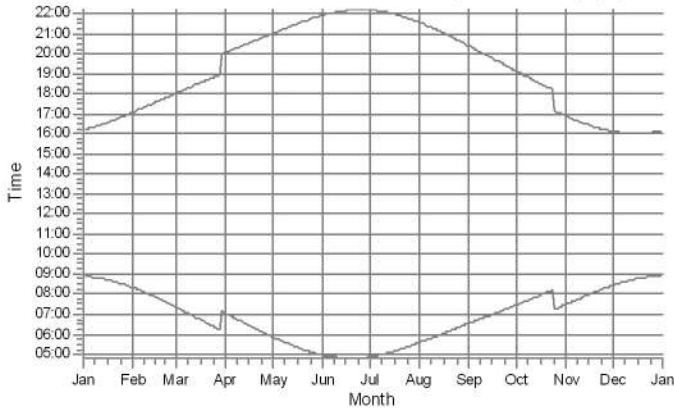
1: ENERCON E-66/20.70 2000 70.0 !-!hub: 85,0 m (TOT: 120,0 m) (1)



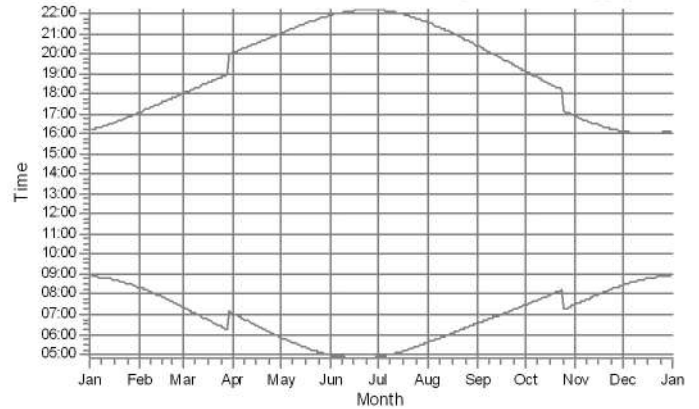
2: ENERCON E-66/20.70 2000 70.0 !-!hub: 85,0 m (TOT: 120,0 m) (2)



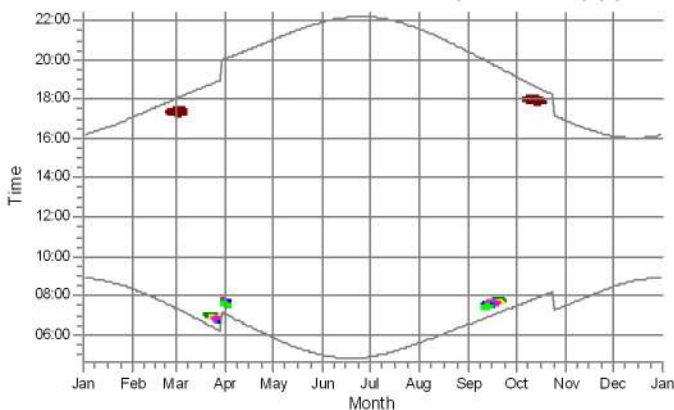
3: ENERCON E-82 2000 82.0 !O!hub: 78,3 m (TOT: 119,3 m) (7)



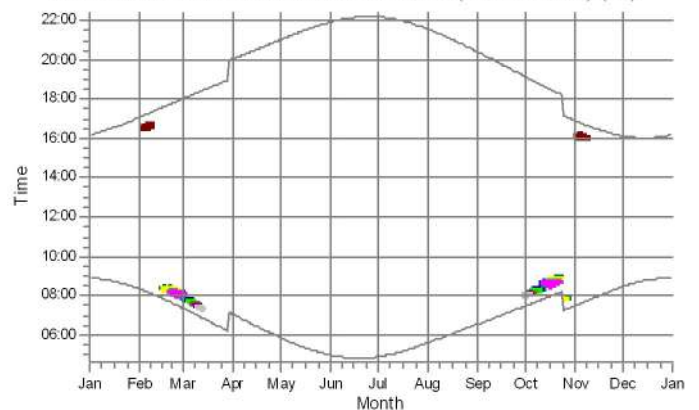
4: ENERCON E-82 2000 82.0 !O!hub: 78,3 m (TOT: 119,3 m) (8)



5: ENERCON E-82 2000 82.0 !O!hub: 78,3 m (TOT: 119,3 m) (9)



6: ENERCON E-82 2000 82.0 !O!hub: 78,3 m (TOT: 119,3 m) (10)



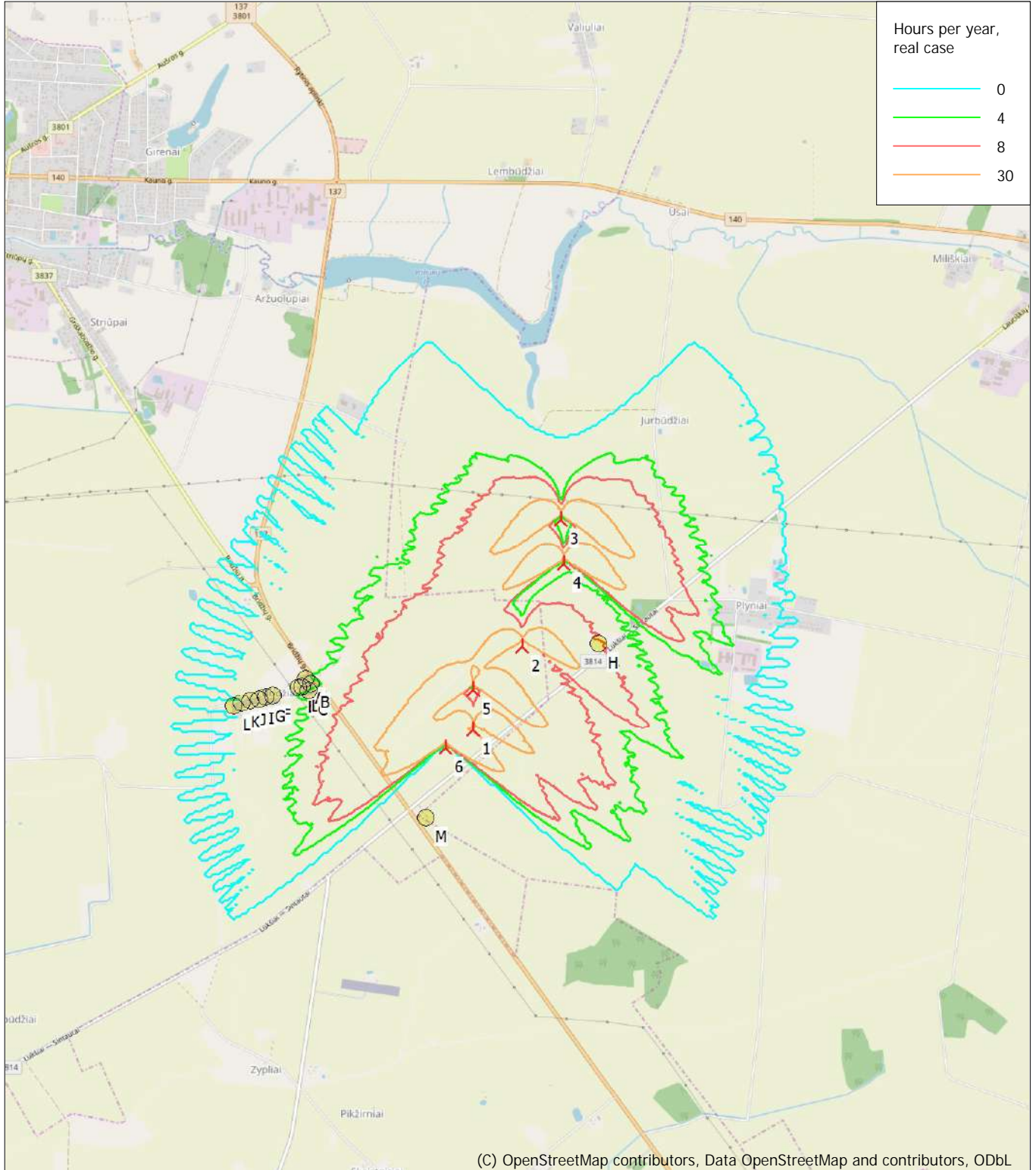
Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)

- G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

SHADOW - Map

Calculation: Planuojamos Enercon E66



0 500 1000 1500 2000 m

Map: EMD OpenStreetMap, Print scale 1:40.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 442.440 North: 6.088.240

New WTG Shadow receptor

Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

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 Calculated:
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SHADOW - Main Result

Calculation: Planuojamos Enercon E66 Shut down
 Assumptions for shadow calculations

Maximum distance for influence
 Calculate only when more than 20 % of sun is covered by the blade
 Please look in WTG table

Minimum sun height over horizon for influence 3 °
 Day step for calculation 1 days
 Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

Flicker curtailment according to specified plan

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
 Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo
 Obstacles used in calculation
 Eye height for map: 1,5 m
 Grid resolution: 1,0 m

All coordinates are in
 Lithuanian TM LKS94-LKS94 (LT)
 WTGs



(C) OpenStreetMap-contributors, Data OpenStreetMap and contributors, ODbL

Scale 1:40.000
 New WTG Shadow receptor

Y	X	Z	Row data/Description	WTG type			Shadow data				
				Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Calculation distance [m]	RPM [RPM]
1	442.261	6.087.347	50,0 ENERCON E-66/20.70 2000 70.0 !-!...No	No	ENERCON	E-66/20.70-2.000	2.000	70,0	85,0	2.500	22,0
2	442.609	6.087.922	50,0 ENERCON E-66/20.70 2000 70.0 !-!...No	No	ENERCON	E-66/20.70-2.000	2.000	70,0	85,0	2.500	22,0
3	442.891	6.088.803	50,3 ENERCON E-82 2000 82.0 !O! hub: ...No	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
4	442.908	6.088.497	50,0 ENERCON E-82 2000 82.0 !O! hub: ...No	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
5	442.265	6.087.626	50,0 ENERCON E-82 2000 82.0 !O! hub: ...No	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
6	442.058	6.087.221	50,0 ENERCON E-82 2000 82.0 !O! hub: ...No	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5

Shadow receptor-Input

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Project:

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Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Main Result

Calculation: Planuojamos Enercon E66 Shut down

Calculation Results

Shadow receptor

Shadow, expected values

No.	Shadow hours per year [h/year]	Avoided hours per year [h/year]
A*	3:16	0:12
B*	3:42	0:14
C*	3:43	0:13
D*	3:14	0:11
E*	3:00	0:10
F*	2:03	0:05
G*	1:48	0:04
H*	6:29	2:17
I*	1:36	0:03
J*	0:57	0:03
K*	0:48	0:02
L*	0:39	0:01
M	0:00	

* Receptors where shadow flicker is reduced by curtailment

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Stopped due to flicker curtailment [h/year]	Expected [h/year]
1	ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)	13:26		3:43
2	ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)	11:27	7:14	4:35
3	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)	0:00		0:00
4	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)	0:00		0:00
5	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)	14:21		4:46
6	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)	18:05		4:43

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:53	08:20	07:20	07:46 (1)	07:03	05:51	04:58	04:54	05:36	06:33	07:03 (2)	07:29	07:30	08:27		
	16:10	17:04	18:02	3 07:49 (1)	20:03	21:02	21:54	22:10	21:32	20:23	8 07:11 (2)	19:07	16:53	16:06		
2	08:53	08:19	07:18	07:43 (1)	07:00	05:48	04:57	04:54	05:37	06:35	07:03 (2)	07:31	07:32	08:29		
	16:11	17:06	18:04	7 07:50 (1)	20:05	21:03	21:56	22:09	21:30	20:20	9 07:12 (2)	19:04	16:51	16:05		
3	08:52	08:17	07:16	07:41 (1)	06:57	05:46	04:56	04:55	05:39	06:36	07:05 (2)	07:32	07:34	08:30		
	16:13	17:08	18:06	10 07:51 (1)	20:07	21:05	21:57	22:09	21:29	20:18	7 07:12 (2)	19:01	16:49	16:05		
4	08:52	08:15	07:13	07:38 (1)	06:55	05:44	04:55	04:56	05:41	06:38	07:06 (2)	07:34	07:36	08:32		
	16:14	17:10	18:08	12 07:50 (1)	20:09	21:07	21:58	22:08	21:27	20:15	5 07:11 (2)	18:59	16:47	16:04		
5	08:52	08:13	07:11	07:37 (1)	06:52	05:42	04:55	04:57	05:43	06:40	07:08 (2)	07:36	08:19 (1)	07:38	08:34	
	16:15	17:12	18:10	14 07:51 (1)	20:11	21:09	21:59	22:08	21:25	20:13	3 07:11 (2)	18:56	2 08:21 (1)	16:45	16:03	
6	08:51	08:11	07:08	07:37 (1)	06:50	05:40	04:54	04:58	05:45	06:42	07:38	08:15 (1)	07:40	08:35		
	16:17	17:14	18:12	12 07:49 (1)	20:13	21:11	22:00	22:07	21:23	20:10	18:54	9 08:24 (1)	16:43	16:03		
7	08:51	08:09	07:06	07:38 (1)	06:47	05:38	04:53	04:59	05:46	06:44	07:40	08:14 (1)	07:42	08:36		
	16:18	17:16	18:14	10 07:48 (1)	20:15	21:13	22:01	22:06	21:21	20:08	18:51	11 08:25 (1)	16:41	16:02		
8	08:50	08:07	07:03	07:40 (1)	06:45	05:36	04:52	05:00	05:48	06:46	07:42	08:13 (1)	07:44	08:38		
	16:19	17:18	18:16	6 07:46 (1)	20:17	21:15	22:02	22:06	21:18	20:05	18:49	13 08:26 (1)	16:39	16:02		
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	06:48	07:44	08:12 (1)	07:46	08:39		
	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	20:03	18:46	14 08:26 (1)	16:37	16:01		
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	06:49	07:46	08:14 (1)	07:48	08:40		
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	20:00	18:44	11 08:25 (1)	16:35	16:01		
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	06:51	07:48	08:16 (1)	07:50	08:41		
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	19:58	18:41	8 08:24 (1)	16:34	16:01		
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:55	06:53	06:53	07:50	08:18 (1)	07:52	08:43		
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	19:55	18:39	5 08:23 (1)	16:32	16:00		
13	08:46	07:57	06:51	06:33	05:26	04:50	05:06	05:57	06:55	06:55	07:52	08:20 (1)	07:54	08:44		
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	19:53	18:37	1 08:21 (1)	16:30	16:00		
14	08:46	07:55	08:22 (6)	06:48	06:30	05:24	04:50	05:07	05:59	06:57	07:54	08:25 (1)	07:56	08:45		
	16:29	17:31	3 08:25 (6)	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00			
15	08:45	07:53	08:19 (6)	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	08:26 (1)	07:58	08:46		
	16:31	17:33	7 08:26 (6)	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00			
16	08:44	07:50	08:17 (6)	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:39 (5)	07:58	08:00	08:47		
	16:33	17:35	10 08:27 (6)	18:32	20:33	21:29	22:09	21:58	21:01	19:45	8 07:47 (5)	18:29	16:25	16:00		
17	08:42	07:48	08:15 (6)	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:37 (5)	08:00	08:48 (6)	08:02	08:47	
	16:34	17:37	13 08:28 (6)	18:34	20:34	21:31	22:09	21:56	20:59	19:42	12 07:49 (5)	18:27	3 08:51 (6)	16:23	16:00	
18	08:41	07:46	08:12 (6)	06:38	06:20	05:17	04:49	05:13	06:07	07:04	07:36 (5)	08:02	10 08:44 (6)	08:04	08:48	
	16:36	17:39	15 08:27 (6)	18:36	20:36	21:33	22:10	21:55	20:57	19:40	14 07:50 (5)	18:25	10 08:54 (6)	16:22	16:00	
19	08:40	07:44	08:10 (6)	06:36	06:18	05:16	04:49	05:14	06:08	07:06	07:34 (5)	08:04	08:42 (6)	08:06	08:49	
	16:38	17:42	17 08:27 (6)	18:38	2 07:02 (5)	20:38	21:35	22:10	21:54	20:54	19:37	15 07:49 (5)	18:22	14 08:56 (6)	16:20	16:01
20	08:39	07:41	08:10 (6)	06:33	06:57 (5)	06:16	05:14	04:49	05:16	06:10	07:08	07:35 (5)	08:06	08:41 (6)	08:08	08:50
	16:40	17:44	18 08:28 (6)	18:40	6 07:03 (5)	20:40	21:36	22:10	21:52	20:52	19:35	14 07:49 (5)	18:20	16 08:57 (6)	16:19	16:01
21	08:38	07:39	08:10 (6)	06:31	06:55 (5)	06:13	05:13	04:49	05:17	06:12	07:10	07:37 (5)	08:08	08:40 (6)	08:10	08:50
	16:42	17:46	16 08:26 (6)	18:42	9 07:04 (5)	20:42	21:38	22:11	21:51	20:50	19:32	12 07:49 (5)	18:18	17 08:57 (6)	16:18	16:01
22	08:36	07:37	08:11 (6)	06:28	06:52 (5)	06:11	05:11	04:49	05:19	06:14	07:12	07:39 (5)	08:10	08:40 (6)	08:12	08:51
	16:44	17:48	15 08:26 (6)	18:44	11 07:03 (5)	20:44	21:40	22:11	21:49	20:47	19:30	9 07:48 (5)	18:15	18 08:58 (6)	16:16	16:02
23	08:35	07:35	08:12 (6)	06:25	06:50 (5)	06:09	05:10	04:49	05:20	06:16	07:14	07:41 (5)	08:12	08:41 (6)	08:13	08:51
	16:46	17:50	12 08:24 (6)	18:46	14 07:04 (5)	20:46	21:41	22:11	21:48	20:45	19:27	7 07:48 (5)	18:13	17 08:58 (6)	16:15	16:02
24	08:33	07:32	08:14 (6)	06:23	06:47 (5)	06:06	05:08	04:50	05:22	06:18	07:16	07:43 (5)	08:14	08:43 (6)	08:15	08:52
	16:48	17:52	8 08:22 (6)	18:48	16 07:03 (5)	20:48	21:43	22:11	21:46	20:42	19:24	3 07:46 (5)	18:11	14 08:57 (6)	16:14	16:03
25	08:32	07:30	06:20	06:47 (5)	06:04	05:07	04:50	05:24	06:20	07:17	07:17	07:16	07:45 (6)	08:17	08:52	
	16:50	17:54	18:50	14 07:01 (5)	20:50	21:44	22:11	21:45	20:40	19:22	17:08	12 07:57 (6)	16:12	16:04		
26	08:30	07:28	06:18	06:48 (5)	06:02	05:05	04:51	05:25	06:22	07:19	07:19	07:18	07:47 (6)	08:19	08:52	
	16:52	17:56	18:52	13 07:01 (5)	20:52	21:46	22:11	21:43	20:38	19:19	17:06	9 07:56 (6)	16:11	16:04		
27	08:29	07:25	06:15	06:49 (5)	05:59	05:04	04:51	05:27	06:23	07:21	07:21	07:20	07:49 (6)	08:21	08:53	
	16:54	17:58	18:54	9 06:58 (5)	20:54	21:47	22:11	21:41	20:35	19:17	17:04	6 07:55 (6)	16:10	16:05		
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	07:23	07:22	07:52 (6)	08:22	08:53		
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	2 07:54 (6)	16:09	16:06			
29	08:26	07:10	06:02	05:55	05:02	04:52	05:30	06:27	07:25	07:25	07:24	08:24	08:53			
	16:58	19:58	20:58	21:50	22:10	21:38	20:30	19:12	17:00	16:08	16:07					
30	08:24	07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:27	07:26	08:26	08:53				
	17:00	20:00	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07						
31	08:22	07:05	06:05	04:59	05:34	06:31	07:06 (2)	07:28	07:28	07:28	08:53					
	17:02	20:01	21:01	21:53	21:34	20:25	3 07:09 (2)	16:55	16:05	16:09						
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227				
Total, worst case		134	168					3	126	212						
Sun reduction		0,24	0,34					0,52	0,40	0,31						
Oper. time red.		1,00	1,00					1,00	1,00	1,00						
Wind dir. red.		0,91	0,98					0,98	1,00	0,93						
Total reduction		0,22	0,33					0,51	0,39	0,28						
Total, real		30	56					2	49	60						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: B - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise and set times, and a summary row at the bottom for 'Potential sun hours' and 'Sun reduction'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)



SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:59 (6) 08:12 (6)	07:03 20:03	
2	08:53 16:11	08:19 17:06	07:18 18:04	08:00 (6) 08:09 (6)	07:00 20:05	13 07:46 (5)
3	08:52 16:13	08:17 17:08	07:16 18:06	07:03 20:07	06:57 20:07	11 07:44 (5)
4	08:52 16:14	08:15 17:10	07:13 18:08	07:03 20:09	06:55 20:09	5 07:41 (5)
5	08:52 16:15	08:13 17:12	07:11 18:10	07:03 20:11	06:52 20:11	
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:35 (1)	06:50 20:13	
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 07:36 (1)	06:47 20:15	
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 07:37 (1)	06:45 20:17	
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 07:37 (1)	06:42 20:19	
10	08:49 16:22	08:03 17:23	06:58 18:20	07:24 (1) 07:37 (1)	06:40 20:21	
11	08:48 16:24	08:01 17:25	06:56 18:22	07:23 (1) 07:37 (1)	06:37 20:23	
12	08:47 16:26	07:59 17:27	06:53 18:24	07:24 (1) 07:36 (1)	06:35 20:25	
13	08:46 16:27	07:57 17:29	06:51 18:26	07:25 (1) 07:34 (1)	06:33 20:27	
14	08:46 16:29	07:55 17:31	06:48 18:28	07:28 (1) 07:32 (1)	06:30 20:29	
15	08:45 16:31	07:53 17:33	06:46 18:30	07:32 (1) 20:31	06:28 20:31	
16	08:44 16:33	07:50 17:35	06:43 18:32	07:24 (1) 20:33	06:25 20:33	
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	06:23 20:34	
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	06:20 20:36	
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	06:18 20:38	
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	06:16 20:40	
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	06:13 20:42	
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	06:11 20:44	
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	06:09 20:46	
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	06:06 20:48	
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	06:04 20:50	
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	06:02 20:52	
27	08:29 16:54	07:25 17:58	06:15 18:54	06:00 20:54	06:00 20:54	
28	08:27 16:56	07:23 18:00	06:13 18:56	06:00 20:56	06:00 20:56	
29	08:26 16:58		06:10 19:58	06:00 20:58	06:00 20:58	
30	08:24 17:00		07:00 20:00	06:00 21:00	06:00 21:00	
31	08:22 17:02		07:05 20:05	06:00 20:05	06:00 20:05	
Potential sun hours	244	270	366	422	499	517
Total, worst case		124	177	29		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,93	0,98	1,00		
Total reduction		0,23	0,33	0,39		
Total, real		28	59	11		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:36	06:33	07:29	08:04 (1)	07:30	08:27	
	22:10	21:32	20:23	19:07	11 08:15 (1)	16:53	16:06	
2	04:54	05:37	06:35	07:31	08:03 (1)	07:32	08:29	
	22:09	21:30	20:20	19:04	12 08:15 (1)	16:51	16:05	
3	04:55	05:39	06:36	07:32	08:02 (1)	07:34	08:30	
	22:09	21:29	20:18	19:01	13 08:15 (1)	16:49	16:05	
4	04:56	05:41	06:38	07:34	08:02 (1)	07:36	08:32	
	22:08	21:27	20:15	18:59	13 08:15 (1)	16:47	16:04	
5	04:57	05:43	06:40	07:36	08:04 (1)	07:38	08:33	
	22:08	21:25	20:13	18:56	11 08:15 (1)	16:45	16:03	
6	04:58	05:45	06:42	07:38	08:06 (1)	07:40	08:35	
	22:07	21:23	20:10	18:54	8 08:14 (1)	16:43	16:03	
7	04:59	05:46	06:44	07:40	08:08 (1)	07:42	08:36	
	22:06	21:21	20:08	18:51	4 08:12 (1)	16:41	16:02	
8	05:00	05:48	06:46	07:42		07:44	08:38	
	22:06	21:18	20:05	18:49		16:39	16:02	
9	05:01	05:50	06:48	07:30 (5)	07:44	07:46	08:39	
	22:05	21:16	20:03	4 07:34 (5)	18:46	16:37	16:01	
10	05:02	05:52	06:49	07:27 (5)	07:46	07:48	08:40	
	22:04	21:14	20:00	10 07:37 (5)	18:44	16:35	16:01	
11	05:03	05:54	06:51	07:25 (5)	07:48	08:36 (6)	07:50	08:41
	22:03	21:12	19:58	13 07:38 (5)	18:41	5 08:41 (6)	16:34	16:01
12	05:05	05:55	06:53	07:24 (5)	07:50	08:33 (6)	07:52	08:43
	22:02	21:10	19:55	15 07:39 (5)	18:39	11 08:44 (6)	16:32	16:00
13	05:06	05:57	06:55	07:23 (5)	07:52	08:31 (6)	07:54	08:44
	22:01	21:08	19:53	16 07:39 (5)	18:37	14 08:45 (6)	16:30	16:00
14	05:07	05:59	06:57	07:24 (5)	07:54	08:30 (6)	07:56	08:45
	22:00	21:06	19:50	14 07:38 (5)	18:34	16 08:46 (6)	16:28	16:00
15	05:09	06:01	06:59	07:26 (5)	07:56	08:29 (6)	07:58	08:46
	21:59	21:03	19:47	12 07:38 (5)	18:32	17 08:46 (6)	16:27	16:00
16	05:10	06:03	07:01	07:28 (5)	07:58	08:28 (6)	08:00	08:47
	21:58	21:01	19:45	9 07:37 (5)	18:29	19 08:47 (6)	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:28 (6)	08:02	08:47
	21:56	20:59	19:42	6 07:36 (5)	18:27	18 08:46 (6)	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:30 (6)	08:04	08:48
	21:55	20:57	19:40	3 07:35 (5)	18:25	16 08:46 (6)	16:22	16:00
19	05:14	06:08	07:06		08:04	08:32 (6)	08:06	08:49
	21:54	20:54	19:37		18:22	13 08:45 (6)	16:20	16:01
20	05:16	06:10	07:08		08:06	08:34 (6)	08:08	08:50
	21:52	20:52	19:35		18:20	10 08:44 (6)	16:19	16:01
21	05:17	06:12	07:10		08:08	08:36 (6)	08:10	08:50
	21:51	20:50	19:32		18:18	7 08:43 (6)	16:18	16:01
22	05:19	06:14	07:12		08:10	08:39 (6)	08:12	08:51
	21:49	20:47	19:30		18:15	3 08:42 (6)	16:16	16:02
23	05:20	06:16	07:14		08:12		08:13	08:51
	21:48	20:45	19:27		18:13		16:15	16:02
24	05:22	06:18	07:16		08:14		08:15	08:52
	21:46	20:42	19:24		18:11		16:14	16:03
25	05:24	06:20	07:17		07:16		08:17	08:52
	21:45	20:40	19:22		17:08		16:12	16:04
26	05:25	06:22	06:56 (2)	07:19	07:18		08:19	08:52
	21:43	20:38	4 07:00 (2)	19:19	17:06		16:11	16:04
27	05:27	06:23	06:54 (2)	07:21	07:20		08:21	08:53
	21:41	20:35	8 07:02 (2)	19:17	17:04		16:10	16:05
28	05:29	06:25	06:54 (2)	07:23	07:22		08:22	08:53
	21:40	20:33	9 07:03 (2)	19:14	17:02		16:09	16:06
29	05:30	06:27	06:56 (2)	07:25	07:24		08:24	08:53
	21:38	20:30	7 07:03 (2)	19:12	17:00		16:08	16:07
30	05:32	06:29	06:58 (2)	07:27	08:06 (1)	07:26	08:26	08:53
	21:36	20:28	5 07:03 (2)	19:09	7 08:13 (1)	16:57	16:07	16:08
31	05:34	06:31	06:59 (2)		07:28			08:53
	21:34	20:25	2 07:01 (2)		16:55			16:09
Potential sun hours	519	464	383		327	254	227	
Total, worst case			35	109	221			
Sun reduction			0,52	0,40	0,31			
Oper. time red.			1,00	1,00	1,00			
Wind dir. red.			0,97	1,00	0,95			
Total reduction			0,50	0,39	0,29			
Total, real			18	43	64			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
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Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: D - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	08:06 (6) 20:03	07:03 21:02	05:51 21:54	04:58 22:10	04:54 21:32	05:36 20:23	07:01 (2) 07:06 (2)	07:29 19:07	07:30 16:53
2	08:53 16:11	08:19 17:06	07:18 18:04	08:08 (6) 20:05	07:00 21:03	05:48 21:56	04:57 22:09	04:54 21:30	05:37 20:20	07:03 (2) 07:06 (2)	07:31 19:04	08:08 (1) 16:51
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	04:55 21:29	05:39 20:18	07:32 19:01	07:32 11	08:06 (1) 16:49
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:34 13	08:05 (1) 16:47
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 20:11	06:52 21:09	05:42 21:59	04:55 22:08	04:57 21:25	05:43 20:13	07:36 18:56	07:36 13	08:05 (1) 16:45
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 20:13	06:50 21:11	05:40 22:00	04:54 22:07	04:58 21:23	05:45 20:10	07:38 18:54	07:38 11	08:06 (1) 16:43
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 20:15	06:47 21:13	05:38 22:01	04:53 22:06	04:59 21:21	05:46 20:08	07:40 18:51	07:40 9	08:08 (1) 16:41
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 20:17	06:45 21:15	05:36 22:02	04:52 22:06	05:00 21:18	05:48 20:05	07:42 18:49	07:42 6	08:10 (1) 16:39
9	08:50 16:21	08:05 17:21	07:01 18:18	07:27 (1) 20:19	06:42 21:17	05:34 22:03	04:52 22:05	05:01 21:16	05:50 20:03	07:44 18:46	07:44 2	08:12 (1) 16:37
10	08:49 16:22	08:03 17:23	06:58 18:20	07:28 (1) 20:21	06:40 21:19	05:32 22:04	04:51 22:04	05:02 21:14	06:52 20:00	07:46 18:44	07:46 11	08:11 (1) 16:35
11	08:48 16:24	08:01 17:25	06:56 18:22	07:28 (1) 20:23	06:37 21:20	05:30 22:05	04:51 22:03	05:03 21:12	05:54 19:58	07:48 18:41	07:48 18:41	08:11 (1) 16:34
12	08:47 16:26	07:59 17:27	06:53 18:24	07:31 (1) 20:25	06:35 21:22	05:28 22:06	04:50 22:02	05:05 21:10	05:55 19:55	07:33 (5) 07:39 (5)	07:50 18:39	07:52 16:32
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:30 (5) 07:41 (5)	07:52 18:37	08:37 (6) 16:30
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:28 (5) 07:41 (5)	07:54 18:34	08:34 (6) 16:28
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:47	07:27 (5) 07:42 (5)	07:56 18:32	08:33 (6) 16:27
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:28 (5) 07:42 (5)	07:58 18:29	08:31 (6) 16:25
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	07:30 (5) 07:42 (5)	08:00 18:27	08:31 (6) 16:23
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	07:32 (5) 07:42 (5)	08:02 18:25	08:30 (6) 16:22
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:08 20:54	07:06 19:37	07:33 (5) 07:40 (5)	08:04 18:22	08:32 (6) 16:20
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	07:35 (5) 07:39 (5)	08:06 18:20	08:34 (6) 16:19
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:08 10	08:36 (6) 16:18
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:10 7	08:39 (6) 16:16
23	08:35 16:46	07:35 17:50	06:25 18:46	06:00 (6) 20:46	06:09 21:41	05:10 22:11	04:49 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:12 3	08:41 (6) 16:15
24	08:33 16:48	07:32 17:52	06:23 18:48	06:47 (5) 20:48	06:06 21:43	05:08 22:11	04:50 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:14 17:16	08:15 16:14
25	08:32 16:50	07:30 17:54	06:20 18:50	06:44 (5) 20:50	06:04 21:44	05:07 22:11	04:50 21:45	06:20 20:40	07:17 19:22	08:14 17:08	08:14 17:08	08:17 16:12
26	08:30 16:52	07:28 17:56	06:18 18:52	06:42 (5) 20:52	06:02 21:46	05:05 22:11	04:51 21:43	06:22 20:38	07:19 19:19	08:18 17:06	08:18 17:06	08:19 16:11
27	08:29 16:54	07:25 17:58	06:15 18:54	06:39 (5) 20:54	05:59 21:47	05:04 22:11	04:51 21:41	06:23 20:35	07:21 19:17	08:21 17:04	08:21 17:04	08:21 16:10
28	08:27 16:56	07:23 18:00	06:13 18:52	06:38 (5) 20:56	05:57 21:49	05:03 22:11	04:52 21:40	06:25 20:33	07:23 19:14	08:22 17:02	08:22 17:02	08:22 16:09
29	08:26 16:58	07:26 18:08	06:10 19:58	07:37 (5) 20:58	05:55 21:50	05:02 22:10	04:52 21:38	06:27 20:30	07:25 19:12	07:25 17:00	07:25 17:00	08:24 16:07
30	08:24 17:00	07:24 18:10	06:08 19:58	07:39 (5) 21:00	05:53 21:52	05:00 22:10	04:53 21:36	06:29 20:28	07:27 19:09	06:58 (2) 07:07 (2)	07:27 16:57	08:26 16:08
31	08:22 17:02	07:22 18:10	06:07 19:58	07:40 (5) 21:00	05:52 21:52	05:04 22:10	04:59 21:36	06:31 20:25	07:28 19:09	06:59 (2) 07:06 (2)	07:28 16:55	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case		125	165					23	100	206		
Sun reduction		0,24	0,34					0,52	0,40	0,31		
Oper. time red.		1,00	1,00					1,00	1,00	1,00		
Wind dir. red.		0,93	0,99					0,98	1,00	0,95		
Total reduction		0,23	0,34					0,50	0,39	0,29		
Total, real		28	55					12	39	60		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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+370 37 407548
Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:53 16:10	08:20 17:04	07:20 18:02	07:58 (6) 20:03	07:03 21:02	05:51 21:54	04:58 22:10	04:54 21:32	05:36 21:32	06:33 20:23	07:01 (2) 19:07	07:29 19:07	08:06 (1) 16:53	07:30 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	08:00 (6) 20:05	07:00 21:03	05:48 21:56	04:57 22:09	04:54 21:30	05:37 21:30	06:35 20:20	07:03 (2) 19:04	07:31 19:04	08:04 (1) 16:51	07:32 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	08:05 (6) 20:05	07:05 21:05	05:46 21:57	04:56 22:09	04:55 21:29	05:39 21:29	06:36 20:18	07:05 (2) 19:01	07:32 19:01	08:03 (1) 16:49	07:34 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	06:55 21:07	05:44 21:58	04:55 22:08	04:56 21:27	05:41 21:27	06:38 20:15	07:34 19:02	07:34 18:59	08:02 (1) 16:47	07:36 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	06:52 21:09	05:42 21:59	04:55 22:08	04:57 21:25	05:43 21:25	06:40 20:13	07:36 18:56	07:36 11:08	08:04 (1) 16:45	07:38 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 20:13	06:50 21:11	05:40 22:00	04:54 22:07	04:58 21:23	05:45 21:23	06:42 20:10	07:38 18:54	07:38 8:08	08:06 (1) 16:43	07:40 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 20:15	06:47 21:13	05:38 22:01	04:53 22:06	04:59 21:21	05:46 21:21	06:44 20:08	07:40 18:51	07:40 5:08	08:08 (1) 16:41	07:42 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 20:17	06:45 21:15	05:36 22:02	04:52 22:06	05:00 21:18	05:48 21:18	06:46 20:05	07:42 18:49	07:42 1:08	08:10 (1) 16:39	07:44 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 20:19	06:42 21:17	05:34 22:03	04:52 22:05	05:01 21:16	05:50 21:16	06:48 20:03	07:44 18:46	07:44 16:37	08:11 (1) 16:37	07:46 16:01
10	08:49 16:22	08:03 17:23	06:58 18:20	07:25 (1) 20:21	06:40 21:19	05:32 22:04	04:51 22:04	05:02 21:14	05:52 21:14	06:49 20:00	07:46 18:44	07:46 18:44	08:11 (1) 16:35	07:48 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	07:25 (1) 20:23	06:37 21:20	05:30 22:05	04:51 22:03	05:03 21:12	05:54 21:12	06:51 19:58	07:48 18:41	07:48 18:41	08:12 (1) 16:34	07:50 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	07:26 (1) 20:25	06:35 21:22	05:28 22:06	04:50 22:02	05:05 21:10	05:55 21:10	06:53 19:55	07:30 (5) 18:39	07:50 8:08	08:33 (6) 16:32	07:52 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	07:29 (1) 20:27	06:33 21:24	05:26 22:07	04:50 22:01	05:06 21:08	05:57 21:08	06:55 19:53	07:28 (5) 18:37	07:52 13:08	08:41 (6) 16:30	07:54 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	07:31 (1) 20:27	06:30 21:24	05:24 22:07	04:50 22:01	05:07 21:06	05:59 21:06	06:57 19:50	07:26 (5) 18:34	07:54 15:08	08:29 (6) 16:28	07:56 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:01 21:03	06:59 19:47	07:26 (5) 18:32	07:56 16:00	08:28 (6) 16:27	07:58 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	06:03 21:01	07:01 19:45	07:28 (5) 18:29	07:58 17:00	08:27 (6) 16:25	08:00 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	06:05 20:59	07:02 19:42	07:30 (5) 18:27	08:00 16:00	08:28 (6) 16:23	08:02 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	06:07 20:57	07:04 19:40	07:32 (5) 18:25	08:02 14:00	08:30 (6) 16:22	08:04 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:08 20:54	06:08 20:54	07:06 19:37	07:33 (5) 18:22	08:04 11:08	08:32 (6) 16:20	08:06 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	06:10 20:52	07:08 19:35	07:35 (5) 18:20	08:06 8:08	08:34 (6) 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	06:12 20:50	07:10 19:32	07:36 (5) 18:18	08:08 5:08	08:36 (6) 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	06:14 20:47	07:12 19:30	07:37 (5) 18:15	08:10 1:08	08:39 (6) 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	06:16 20:45	07:14 19:27	07:38 (5) 18:13	08:12 08:13	08:43 (6) 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	06:18 20:42	07:16 19:24	07:40 (5) 18:11	08:14 18:11	08:44 (6) 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	06:20 20:40	07:17 19:22	07:42 (5) 18:08	08:16 17:08	08:46 (6) 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	06:22 20:38	07:19 19:19	07:44 (5) 18:04	08:18 17:06	08:49 (6) 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	06:39 (5) 20:54	05:59 21:47	05:04 22:11	04:51 21:41	06:23 20:35	06:23 20:35	07:21 19:17	07:46 (5) 18:04	08:21 17:04	08:51 (6) 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	06:37 (5) 20:56	05:57 21:49	05:03 22:11	04:52 21:40	06:25 20:33	06:25 20:33	07:23 19:14	07:48 (5) 18:02	08:22 17:02	08:52 (6) 16:09	08:53 16:06
29	08:26 16:58	07:21 18:02	06:10 19:58	07:36 (5) 20:58	05:55 21:50	05:02 22:10	04:52 21:38	06:27 20:30	06:27 20:30	07:25 19:12	07:50 (2) 18:00	08:24 17:00	08:24 (6) 16:08	08:53 16:07
30	08:24 17:00	07:18 18:04	06:08 20:00	07:37 (5) 21:00	05:53 21:52	05:00 22:10	04:53 21:36	06:29 20:28	06:29 20:28	07:27 19:09	07:52 (2) 18:00	08:26 16:57	08:26 (6) 16:07	08:53 16:08
31	08:22 17:02	07:15 18:00	06:05 20:01	07:38 (5) 21:01	05:52 21:53	04:59 21:34	05:34 20:25	06:31 20:25	06:31 20:25	07:28 19:09	07:59 (2) 18:00	08:28 16:55	08:28 (6) 16:07	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	89	327	191	254	227
Total, worst case			108	163				22		89		191		
Sun reduction			0,24	0,34				0,52		0,40		0,31		
Oper. time red.			1,00	1,00				1,00		1,00		1,00		
Wind dir. red.			0,94	0,99				0,98		1,00		0,95		
Total reduction			0,23	0,33				0,50		0,39		0,29		
Total, real			25	55				11		35		56		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:46 (6) 20:03	07:29 (5) 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (6) 20:05	07:29 (5) 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (6) 20:07	07:36 (5) 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (6) 20:09	06:55 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 20:11	06:52 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:37 (6) 20:13	06:50 21:11	04:54 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	07:38 (6) 20:15	06:47 21:13	04:53 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	07:41 (6) 20:17	06:45 21:15	04:52 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:44 (6) 20:19	06:42 21:17	04:52 22:03
10	08:49 16:23	08:03 17:23	06:58 18:20	07:03 20:21	06:40 21:19	04:51 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (1) 20:23	06:37 21:20	04:51 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	07:21 (1) 20:25	06:35 21:22	04:50 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	07:18 (1) 20:27	06:33 21:24	04:50 22:07
14	08:46 16:29	07:55 17:31	06:48 18:28	07:15 (1) 20:29	06:30 21:26	04:50 22:07
15	08:45 16:31	07:53 17:33	06:46 18:30	07:22 (1) 20:31	06:28 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	06:43 18:32	07:21 (1) 20:33	06:25 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	06:41 18:34	07:12 (1) 20:34	06:23 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	06:38 18:36	07:20 (1) 20:36	06:21 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	06:36 18:38	07:16 (1) 20:38	06:18 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	06:33 18:40	07:15 (1) 20:40	06:16 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	06:31 18:42	07:14 (1) 20:42	06:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	06:28 18:44	07:13 (1) 20:44	06:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	06:25 18:46	07:22 (1) 20:46	06:09 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	06:23 18:48	07:21 (1) 20:48	06:06 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	06:20 18:50	07:20 (1) 20:50	06:04 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	06:18 18:52	07:19 (1) 20:52	06:02 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 18:54	06:39 (5) 20:54	05:59 21:47	04:51 22:11
28	08:27 16:56	07:23 18:00	06:13 18:56	06:40 (5) 20:56	05:57 21:49	04:52 22:11
29	08:26 16:58	07:21 18:02	06:11 18:58	06:41 (5) 20:58	05:55 21:50	04:52 22:11
30	08:24 17:00	07:19 18:04	06:09 19:00	07:34 (5) 21:00	05:53 21:52	04:53 22:11
31	08:22 17:02	07:17 18:06	06:07 19:02	07:32 (5) 21:02	05:51 21:54	04:53 22:11
Potential sun hours	244	270	366	422	499	517
Total, worst case		2	148	17		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,96	0,98	1,00		
Total reduction		0,24	0,33	0,39		
Total, real		0	49	7		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:36	06:33	07:01 (2)	07:29	07:56 (1)	07:30	08:27
	22:10	21:32	20:23	19:07	19:07	18:02 (1)	16:53	16:06
2	04:54	05:37	06:35	07:02 (2)	07:31	07:58 (1)	07:32	08:29
	22:09	21:30	20:20	19:04	19:04	18:01 (1)	16:51	16:05
3	04:55	05:39	06:36	07:33	07:33		07:34	08:31
	22:09	21:29	20:18	19:01	19:01		16:49	16:05
4	04:56	05:41	06:38	07:34	07:34		07:36	08:32
	22:08	21:27	20:15	18:59	18:59		16:47	16:04
5	04:57	05:43	06:40	07:36	07:36		07:38	08:34
	22:08	21:25	20:13	18:56	18:56		16:45	16:03
6	04:58	05:45	06:42	07:38	07:38	08:15 (6)	07:40	08:35
	22:07	21:23	20:10	18:54	18:54	08:23 (6)	16:43	16:03
7	04:59	05:46	06:44	07:40	07:40	08:13 (6)	07:42	08:36
	22:06	21:21	20:08	18:51	18:51	08:25 (6)	16:41	16:02
8	05:00	05:48	06:46	07:42	07:42	08:12 (6)	07:44	08:38
	22:06	21:18	20:05	18:49	18:49	08:25 (6)	16:39	16:02
9	05:01	05:50	06:48	07:44	07:44	08:12 (6)	07:46	08:39
	22:05	21:16	20:03	18:46	18:46	08:26 (6)	16:37	16:01
10	05:02	05:52	06:49	07:23 (5)	07:46	08:14 (6)	07:48	08:40
	22:04	21:14	20:00	07:29 (5)	18:44	08:26 (6)	16:35	16:01
11	05:03	05:54	06:51	07:21 (5)	07:48	08:16 (6)	07:50	08:41
	22:03	21:12	19:58	07:31 (5)	18:42	08:25 (6)	16:34	16:01
12	05:05	05:56	06:53	07:21 (5)	07:50	08:18 (6)	07:52	08:43
	22:02	21:10	19:55	07:32 (5)	18:39	08:25 (6)	16:32	16:00
13	05:06	05:57	06:55	07:23 (5)	07:52	08:20 (6)	07:54	08:44
	22:01	21:08	19:53	07:32 (5)	18:37	08:24 (6)	16:30	16:00
14	05:07	05:59	06:57	07:24 (5)	07:54		07:56	08:45
	22:00	21:06	19:50	07:31 (5)	18:34		16:28	16:00
15	05:09	06:01	06:59	07:26 (5)	07:56		07:58	08:46
	21:59	21:03	19:47	07:31 (5)	18:32		16:27	16:00
16	05:10	06:03	07:01	07:28 (5)	07:58		08:00	08:47
	21:58	21:01	19:45	07:30 (5)	18:29		16:25	16:00
17	05:11	06:05	07:02		08:00		08:02	08:47
	21:56	20:59	19:42		18:27		16:23	16:00
18	05:13	06:07	07:04		08:02		08:04	08:48
	21:55	20:57	19:40		18:25		16:22	16:00
19	05:14	06:09	07:06		08:04		08:06	08:49
	21:54	20:54	19:37		18:22		16:20	16:01
20	05:16	06:10	07:08		08:06		08:08	08:50
	21:52	20:52	19:35		18:20		16:19	16:01
21	05:17	06:12	07:10		08:08		08:10	08:50
	21:51	20:50	19:32		18:18		16:18	16:01
22	05:19	06:14	07:12		08:10		08:12	08:51
	21:49	20:47	19:30		18:15		16:16	16:02
23	05:20	06:16	07:14		08:12		08:13	08:51
	21:48	20:45	19:27		18:13		16:15	16:02
24	05:22	06:18	07:16		08:14		08:15	08:52
	21:46	20:42	19:24		18:11		16:14	16:03
25	05:24	06:20	07:17		07:16		08:17	08:52
	21:45	20:40	19:22		17:08		16:12	16:04
26	05:25	06:22	07:19		07:18		08:19	08:52
	21:43	20:38	19:19		17:06		16:11	16:04
27	05:27	06:23	07:21	07:54 (1)	07:20		08:21	08:53
	21:41	20:35	19:17	08:00 (1)	17:04		16:10	16:05
28	05:29	06:25	07:23	07:52 (1)	07:22		08:22	08:53
	21:40	20:33	19:14	08:02 (1)	17:02		16:09	16:06
29	05:30	06:27	06:56 (2)	07:52 (1)	07:24		08:24	08:53
	21:38	20:30	6 07:02 (2)	19:12	10 08:02 (1)	17:00	16:08	16:07
30	05:32	06:29	06:58 (2)	07:27	07:54 (1)	07:26	08:26	08:53
	21:36	20:28	5 07:03 (2)	19:09	8 08:02 (1)	16:57	16:07	16:08
31	05:34	06:31	06:59 (2)		07:28			08:53
	21:34	20:25	3 07:02 (2)		16:55			16:09
Potential sun hours	519	464	383		327		254	227
Total, worst case			14		85		88	
Sun reduction			0,52		0,40		0,31	
Oper. time red.			1,00		1,00		1,00	
Wind dir. red.			0,98		0,99		0,97	
Total reduction			0,50		0,39		0,30	
Total, real			7		33		26	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
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+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: G - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (7)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for time slots (08:53 to 17:02). Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June		
1	08:53 16:10	08:20 17:04		07:20 18:02	21 17:32 (5) 20:03	05:50 21:01	04:58 21:54	
2	08:53 16:11	08:19 17:06	4 16:29 (1) 16:33 (6)	07:18 18:04	20 17:32 (5) 20:05	05:48 21:03	04:57 21:56	
3	08:52 16:13	08:17 17:08	7 16:28 (1) 16:35 (6)	07:15 18:06	20 17:31 (5) 20:07	05:46 21:05	04:56 21:57	
4	08:52 16:14	08:15 17:10	10 16:27 (1) 16:37 (6)	07:13 18:08	19 17:31 (5) 20:09	05:44 21:07	04:55 21:58	
5	08:52 16:15	08:13 17:12	14 16:26 (1) 16:40 (6)	07:11 18:10	16 17:29 (5) 20:11	05:42 21:09	04:54 21:59	
6	08:51 16:16	08:11 17:14	16 16:26 (1) 16:42 (6)	07:08 18:12	14 17:28 (5) 20:13	05:40 21:11	04:54 22:00	
7	08:51 16:18	08:09 17:16	19 16:26 (1) 16:45 (6)	07:06 18:14	9 17:25 (5) 20:15	05:38 21:13	04:53 22:01	
8	08:50 16:19	08:07 17:18	18 16:26 (1) 16:44 (6)	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	
9	08:49 16:21	08:05 17:20	17 16:27 (1) 16:44 (6)	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	
10	08:49 16:22	08:03 17:23	15 16:26 (1) 16:41 (6)	06:58 18:20	06:40 20:21	1 18:47 (2) 18:48 (2)	05:32 21:18	04:51 22:04
11	08:48 16:24	08:01 17:25	13 16:27 (1) 16:40 (1)	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	
12	08:47 16:26	07:59 17:27	10 16:29 (1) 16:39 (1)	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	
13	08:46 16:27	07:57 17:29	5 16:32 (1) 16:37 (1)	06:51 18:26	06:32 20:27	05:26 21:24	04:50 22:07	
14	08:45 16:29	07:55 17:31	06:48 18:28	06:30 18:28	1 18:55 (2) 18:56 (2)	05:24 21:26	04:49 22:07	
15	08:44 16:31	07:52 17:33	06:46 18:30	06:28 20:30	05:22 21:28	04:49 22:08	04:49 22:08	
16	08:43 16:32	07:50 17:35	06:43 18:32	06:25 20:32	05:21 21:29	04:49 22:08	04:49 22:08	
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	04:49 22:09	
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:09	04:49 22:09	
19	08:40 16:38	07:44 17:41	06:35 18:38	06:18 20:38	05:16 21:34	04:49 22:10	04:49 22:10	
20	08:39 16:40	07:41 17:43	06:33 18:40	06:15 20:40	05:14 21:36	04:49 22:10	04:49 22:10	
21	08:37 16:42	07:39 17:46	06:30 18:42	06:13 20:42	05:12 21:38	04:49 22:10	04:49 22:10	
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:39	04:49 22:11	04:49 22:11	
23	08:35 16:45	07:34 17:50	3 17:18 (5) 17:21 (5)	06:25 18:46	06:08 20:46	05:09 21:41	04:49 22:11	
24	08:33 16:47	07:32 17:52	7 17:16 (5) 17:23 (5)	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	
25	08:32 16:49	07:30 17:54	11 17:14 (5) 17:25 (5)	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	
26	08:30 16:51	07:27 17:56	15 17:13 (5) 17:28 (5)	06:18 18:52	9 18:00 (2) 18:09 (2)	05:05 21:46	04:50 22:11	
27	08:29 16:53	07:25 17:58	17 17:12 (5) 17:29 (5)	06:15 18:54	16 18:02 (2) 20:54	05:04 21:47	04:51 22:11	
28	08:27 16:55	07:23 18:00	20 17:12 (5) 17:32 (5)	06:13 18:56	20 18:14 (2) 20:56	05:03 21:49	04:51 22:11	
29	08:25 16:57		07:10 19:57	23 18:52 (2) 19:15 (2)	05:55 20:58	05:01 21:50	04:52 22:10	
30	08:24 17:00		07:07 19:59	25 18:51 (2) 19:16 (2)	05:53 21:00	05:00 21:52	04:53 22:10	
31	08:22 17:02		07:05 20:01	27 18:49 (2) 19:16 (2)	04:59 21:53	04:59 21:53		
Potential sun hours	244	270	366	422	499	517		
Total, worst case		221	239	2				
Sun reduction		0,24	0,34	0,39				
Oper. time red.		1,00	1,00	1,00				
Wind dir. red.		0,85	0,96	1,00				
Total reduction		0,20	0,32	0,39				
Total, real		45	77	1				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December
1	04:53	05:35	06:33	18:48 (2)	07:29	07:30
	22:10	21:32	20:23	19:10 (2)	19:06	16:53
2	04:54	05:37	06:34	18:46 (2)	07:30	15:56 (1)
	22:09	21:30	20:20	19:11 (2)	19:04	16:12 (6)
3	04:55	05:39	06:36	18:44 (2)	07:32	15:56 (1)
	22:09	21:28	20:18	19:11 (2)	19:01	16:14 (6)
4	04:56	05:41	06:38	18:43 (2)	07:34	15:56 (1)
	22:08	21:26	20:15	19:12 (2)	18:59	16:14 (6)
5	04:57	05:43	06:40	18:43 (2)	07:36	15:56 (1)
	22:08	21:24	20:13	19:12 (2)	18:56	16:12 (6)
6	04:58	05:44	06:42	18:42 (2)	07:38	15:56 (1)
	22:07	21:22	20:10	19:12 (2)	18:54	16:09 (6)
7	04:59	05:46	06:44	18:42 (2)	07:40	15:58 (1)
	22:06	21:20	20:08	19:12 (2)	18:51	16:08 (6)
8	05:00	05:48	06:46	18:41 (2)	07:42	15:58 (1)
	22:06	21:18	20:05	19:11 (2)	18:49	16:06 (6)
9	05:01	05:50	06:47	18:41 (2)	07:44	16:00 (1)
	22:05	21:16	20:03	19:11 (2)	18:46	16:03 (6)
10	05:02	05:52	06:49	18:41 (2)	07:46	16:00 (1)
	22:04	21:14	20:00	19:10 (2)	18:44	16:03 (6)
11	05:03	05:54	06:51	18:41 (2)	07:48	16:00 (1)
	22:03	21:12	19:58	19:10 (2)	18:41	16:03 (6)
12	05:04	05:55	06:53	18:41 (2)	07:50	16:00 (1)
	22:02	21:10	19:55	19:09 (2)	18:39	16:03 (6)
13	05:06	05:57	06:55	18:41 (2)	07:52	16:00 (1)
	22:01	21:08	19:52	19:07 (2)	18:36	16:03 (6)
14	05:07	05:59	06:57	18:42 (2)	07:54	16:00 (1)
	22:00	21:05	19:50	19:05 (2)	18:34	16:03 (6)
15	05:08	06:01	06:59	18:43 (2)	07:56	16:00 (1)
	21:59	21:03	19:47	19:04 (2)	18:32	16:03 (6)
16	05:10	06:03	07:00	18:45 (2)	07:57	16:00 (1)
	21:57	21:01	19:45	19:02 (2)	18:29	16:03 (6)
17	05:11	06:05	07:02	18:48 (2)	07:59	16:00 (1)
	21:56	20:59	19:42	18:58 (2)	18:27	16:03 (6)
18	05:13	06:06	07:04	18:41 (2)	08:01	16:00 (1)
	21:55	20:56	19:40	18:24	6	16:03 (6)
19	05:14	06:08	07:06	18:03	17:50 (5)	16:00 (1)
	21:54	20:54	19:37	18:22	1	16:03 (6)
20	05:16	06:10	07:08	18:05	17:51 (5)	16:00 (1)
	21:52	20:52	19:35	18:20		16:03 (6)
21	05:17	06:12	07:10	18:07	16:19	16:00 (1)
	21:51	20:49	19:32	18:17		16:03 (6)
22	05:19	06:14	07:12	18:09	16:17	16:00 (1)
	21:49	20:47	19:29	18:15		16:03 (6)
23	05:20	06:16	07:14	18:11	16:16	16:00 (1)
	21:48	20:45	19:27	18:13		16:03 (6)
24	05:22	06:18	07:15	18:13	16:15	16:00 (1)
	21:46	20:42	19:24	18:10		16:03 (6)
25	05:23	06:20	07:17	18:15	16:13	16:00 (1)
	21:45	20:40	19:22	17:08		16:03 (6)
26	05:25	06:21	07:19	17:17	16:12	16:00 (1)
	21:43	20:37	19:19	17:06		16:03 (6)
27	05:27	06:23	07:21	17:19	16:11	16:00 (1)
	21:41	20:35	19:17	17:04		16:03 (6)
28	05:28	06:25	07:23	17:21	16:10	16:00 (1)
	21:39	20:33	19:14	17:02		16:03 (6)
29	05:30	06:27	18:56 (2)	07:24	16:01 (1)	16:00 (1)
	21:38	20:30	19:05 (2)	16:59	6	16:03 (6)
30	05:32	06:29	18:52 (2)	07:27	16:07 (1)	16:00 (1)
	21:36	20:28	19:07 (2)	16:57	11	16:03 (6)
31	05:34	06:31	18:49 (2)	07:28	16:09 (1)	16:00 (1)
	21:34	20:25	19:09 (2)	16:55	13	16:03 (6)
Potential sun hours	519	464	383	327	254	227
Total, worst case		44	435	223	118	
Sun reduction		0,52	0,40	0,31	0,16	
Oper. time red.		1,00	1,00	1,00	1,00	
Wind dir. red.		1,00	1,00	0,91	0,81	
Total reduction		0,51	0,39	0,27	0,12	
Total, real		22	169	61	15	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: I - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for time slots (08:53 to 17:02). Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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+370 37 407548
Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10) Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	08:06 (6) 08:11 (6)	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	08:03 (6) 08:13 (6)	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:57 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 08:14 (6)	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 07:37 (6)	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:34 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (6) 07:37 (6)	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	08:04 (6) 08:14 (6)	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (6) 07:38 (6)	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	08:08 (6) 08:13 (6)	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (6) 07:37 (6)	06:45 20:17	05:36 21:15	04:52 22:02	05:48 22:06	05:48 21:18	06:46 20:05	07:42 18:49	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 07:36 (6)	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	07:24 (6) 07:35 (6)	06:40 20:21	05:32 21:19	04:51 22:04	05:52 22:04	05:52 21:14	06:50 20:00	07:46 18:44	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	07:25 (6) 07:33 (6)	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:42	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:56 21:10	06:53 19:55	07:50 18:39	08:43 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	08:44 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:48 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	08:45 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	07:10 (1) 07:12 (1)	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:47	07:56 18:32	08:46 16:27
16	08:44 16:33	07:50 17:35	06:43 18:32	07:08 (1) 07:13 (1)	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	08:00 18:29	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	07:05 (1) 07:12 (1)	06:23 20:35	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	07:02 (1) 07:11 (1)	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	07:04 (1) 07:09 (1)	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:49 16:01
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:14 17:08	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	08:14 17:06	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:14 17:04	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	08:14 17:02	08:22 16:09	08:53 16:06
29	08:26 16:58	07:10 17:58	06:07 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	08:14 17:00	08:24 16:08	08:53 16:07
30	08:24 17:00	07:08 20:00	06:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	08:14 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02	07:05 20:01	06:05 20:01	04:59 21:53	05:04 21:53	04:51 20:25	05:27 21:34	06:23 20:25	07:21 19:14	08:14 17:02	08:22 16:09	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case			79						8	28	53	
Sun reduction			0,34						0,52	0,40	0,31	
Oper. time red.			1,00						1,00	1,00	1,00	
Wind dir. red.			0,98						0,97	1,00	0,98	
Total reduction			0,34						0,50	0,39	0,30	
Total, real			27						4	11	16	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	08:01 (6) 08:08 (6)	07:30 16:53
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:59 (6) 08:09 (6)	07:32 16:51
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:37 20:18	07:33 19:01	08:00 (6) 08:10 (6)	07:34 16:49
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 08:10 (6)	07:36 16:47
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (6) 08:10 (6)	07:38 16:45
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:06 (6) 08:09 (6)	07:40 16:43
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (6) 07:33 (6)	06:47 20:15	05:38 21:13	04:53 22:01	05:46 21:21	06:44 20:08	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (6) 07:33 (6)	06:45 20:17	05:36 21:15	04:52 22:02	05:48 21:18	06:46 20:05	07:42 18:49	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 07:32 (6)	06:42 20:19	05:34 21:17	04:52 22:03	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	07:23 (6) 07:32 (6)	06:40 20:21	05:32 21:19	04:51 22:04	05:52 21:14	06:50 20:00	07:46 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (6) 07:31 (6)	06:37 20:23	05:30 21:20	04:51 22:05	05:54 21:12	06:51 19:58	07:48 18:42	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	07:21 (6) 07:30 (6)	06:35 20:25	05:28 21:22	04:50 22:06	05:56 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	07:24 (6) 07:25 (6)	06:33 20:27	05:26 21:24	04:50 22:07	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:48	07:56 18:32	07:58 16:27	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	07:08 (1) 07:09 (1)	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25
17	08:42 16:34	07:48 17:37	06:41 18:34	07:05 (1) 07:09 (1)	06:23 20:35	05:19 21:31	04:49 22:09	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:24	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	07:02 (1) 07:08 (1)	06:20 20:36	05:17 21:33	04:49 22:10	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	07:00 (1) 07:08 (1)	06:18 20:38	05:16 21:35	04:49 22:10	06:09 20:54	07:06 19:37	08:04 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:42 17:44	06:33 18:40	07:00 (1) 07:05 (1)	06:16 20:40	05:14 21:36	04:49 22:10	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18	08:51 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:50 22:11	05:20 21:48	06:16 20:45	07:14 19:27	07:46 (1) 07:48 (1)	08:12 18:13	08:13 16:15
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	07:44 (1) 07:51 (1)	08:14 18:11	08:15 16:14
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	07:45 (1) 07:52 (1)	07:16 17:08	08:17 16:12
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:46 (1) 07:51 (1)	07:18 17:06	08:19 16:11
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:48 (1) 07:50 (1)	07:20 17:04	08:21 16:10
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	07:22 17:02	08:22 16:09	08:53 16:06
29	08:26 16:58	07:10 19:58	07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 20:30	06:27 20:30	06:56 (2) 06:59 (2)	07:25 19:12	07:24 17:00	08:24 16:08
30	08:24 17:00	07:08 20:00	07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	06:58 (2) 07:00 (2)	07:27 19:09	07:26 16:57	08:26 16:07
31	08:22 17:02	07:05 20:01	07:05 20:01	04:59 21:53	05:04 21:53	04:51 20:25	05:34 21:34	06:31 20:25	06:59 (2) 07:00 (2)	07:28 16:55	07:28 16:55	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case			68						6	23	44	
Sun reduction			0,34						0,52	0,40	0,31	
Oper. time red.			1,00						1,00	1,00	1,00	
Wind dir. red.			0,99						0,97	1,00	0,98	
Total reduction			0,34						0,50	0,39	0,30	
Total, real			23						3	9	13	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: L - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times and shadow reduction factors. Includes summary rows for 'Potential sun hours' and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E66 Shut downShadow receptor: M - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

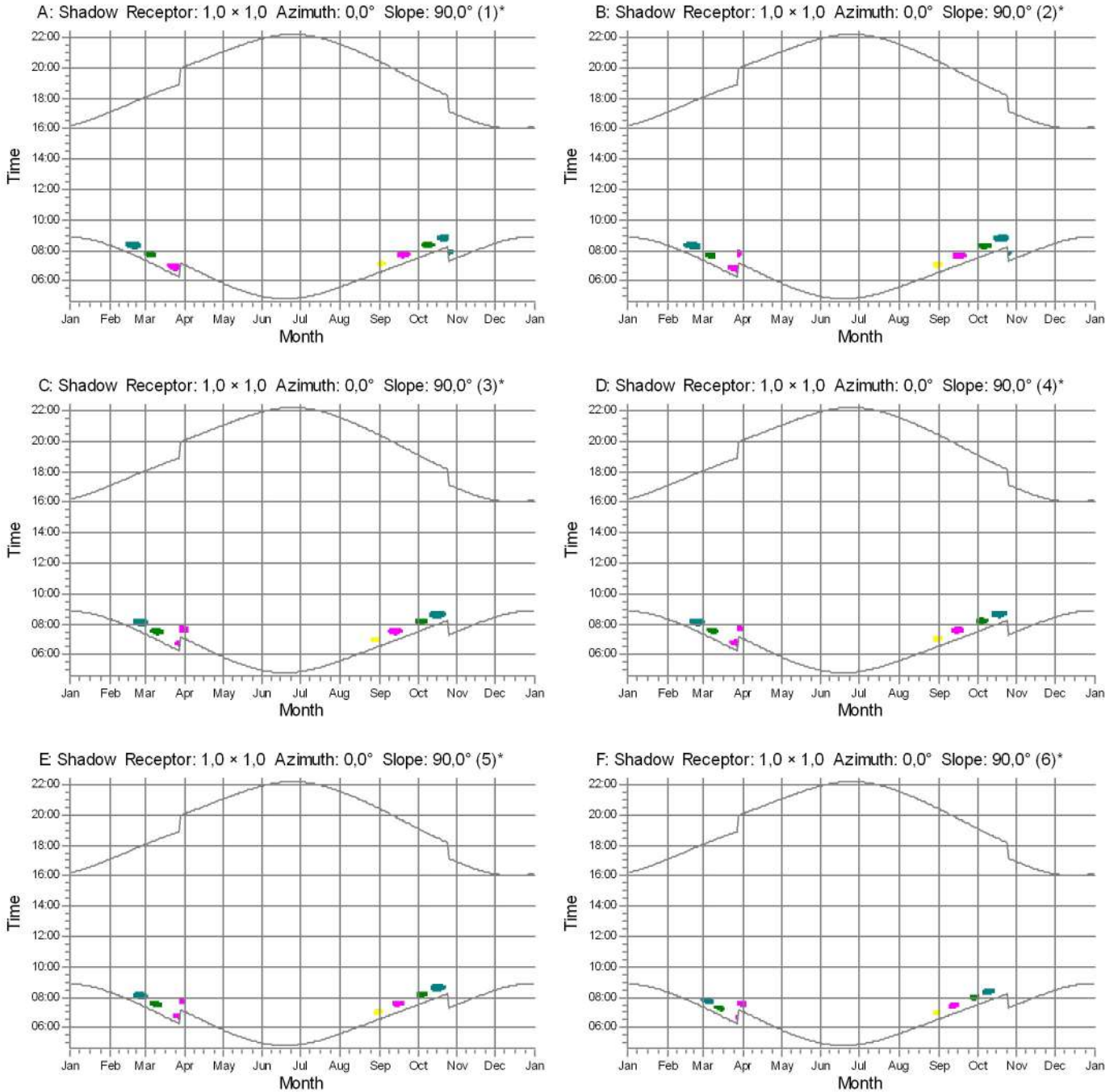
	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:51	04:58	04:54	05:36	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:55	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:24	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:02
9	08:49	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:01
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:55	06:53	07:50	07:52	08:42
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:33	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
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14	08:45	07:55	06:48	06:30	05:24	04:50	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:33	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:34	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:13	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:18	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:39	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:15	08:17	08:52
	16:50	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:27	06:18	06:02	05:05	04:51	05:25	06:22	07:19	08:17	08:19	08:52
	16:52	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:20	08:53
	16:54	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	08:21	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:01	16:09	16:06
29	08:25		07:10	05:55	05:02	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E66 Shut down



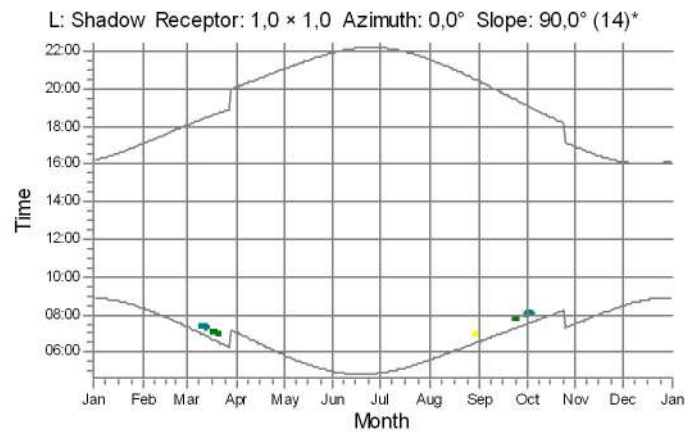
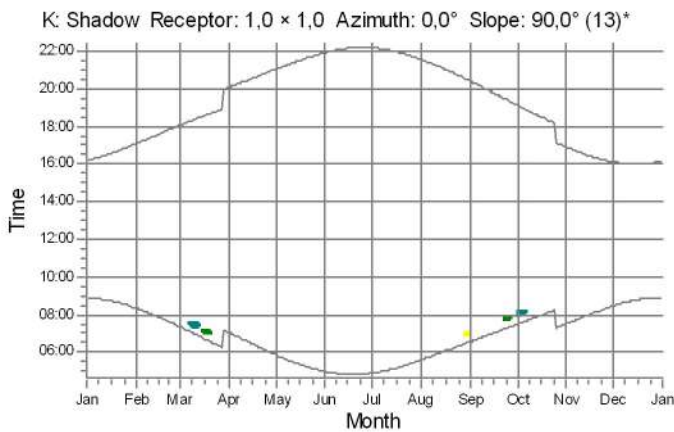
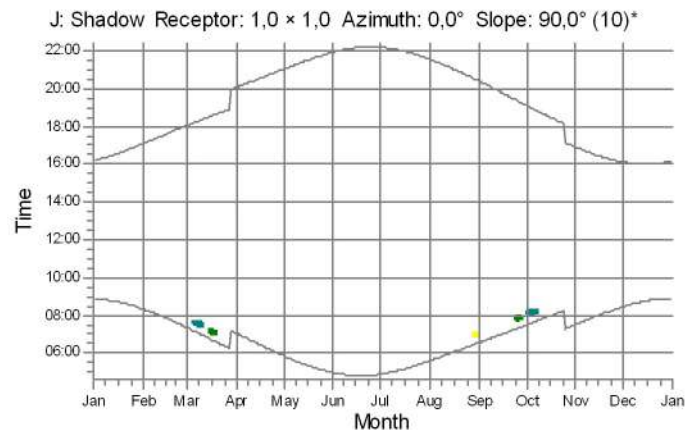
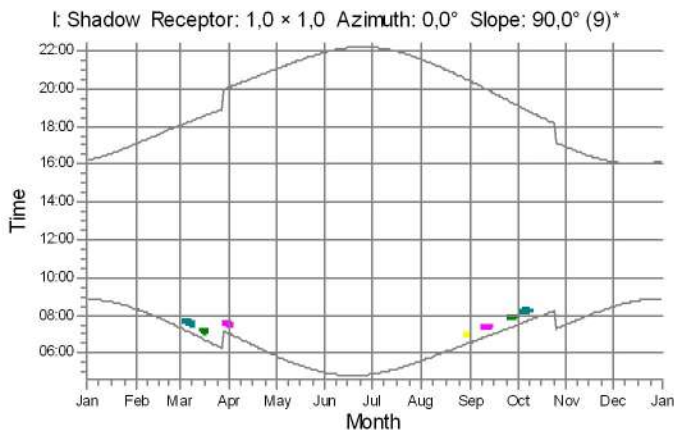
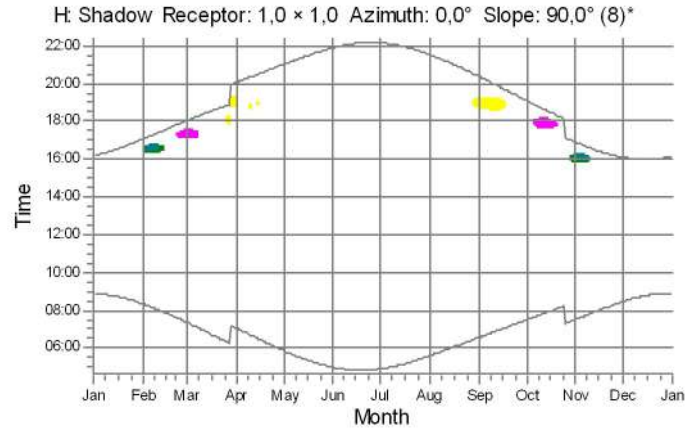
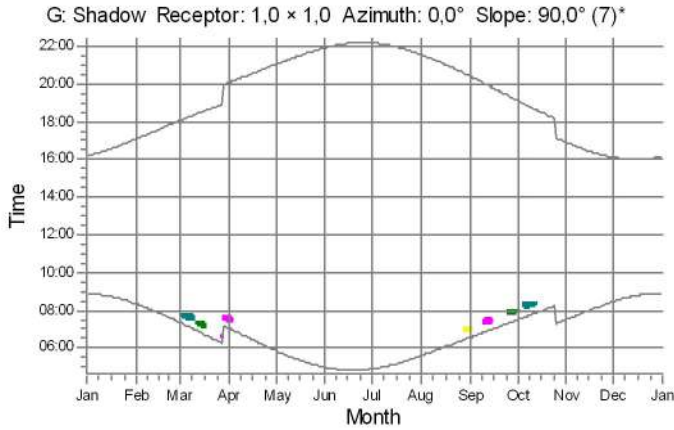
WTGs

- 1: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)
- 2: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)
- 5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E66 Shut down



WTGs

- 1: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)
- 2: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)
- 5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

* Results reduced by flicker curtailment

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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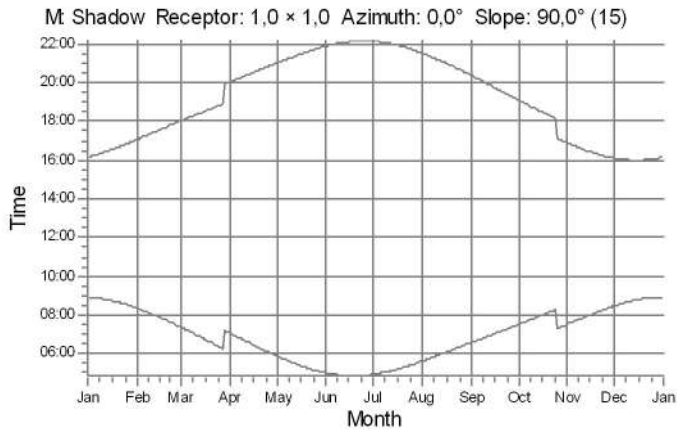
Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

2021.06.16 13:36/3.4.415

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E66 Shut down



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E66 Shut downWTG: 1 - ENERCON E-66/20.70 2000 70.0 I-! hub: 85,0 m (TOT: 120,0 m) (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and multiple rows for days, showing start and end times and potential sun hours.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E66 Shut downWTG: 2 - ENERCON E-66/20.70 2000 70.0 I-! hub: 85,0 m (TOT: 120,0 m) (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and rows for each day of the year (1-31). Columns contain start and end times for shadow periods. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E66 Shut downWTG: 3 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:22	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E66 Shut downWTG: 4 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:30	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:02	16:09	16:06
29	08:25		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E66 Shut downWTG: 5 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
Assumptions for shadow calculations
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a matrix of sun rise and set times (hh:mm) and a final column for 'Sum of minutes with flicker'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:36/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E66 Shut downWTG: 6 - ENERCON E-82 2000 82.0 !OI! hub: 78,3 m (TOT: 119,3 m) (10)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (e.g., 08:53 | 17:04) and a numerical value representing shadow minutes. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

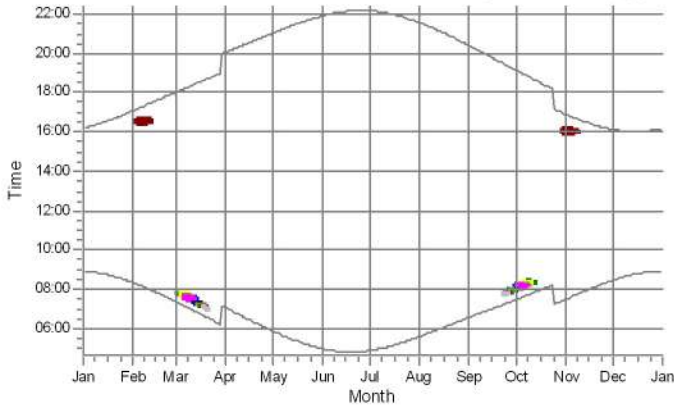
Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

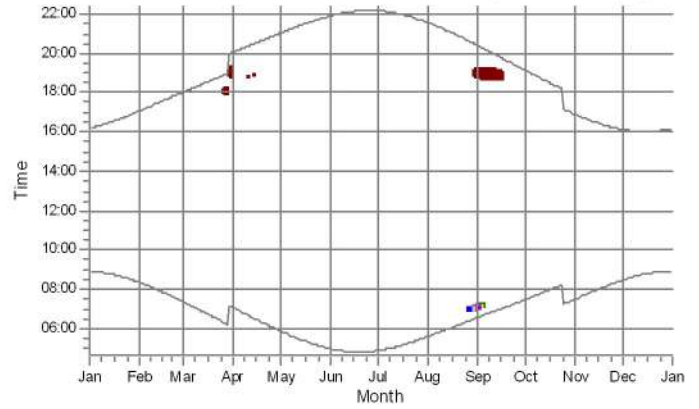
SHADOW - Calendar per WTG, graphical

Calculation: Planuojamos Enercon E66 Shut down

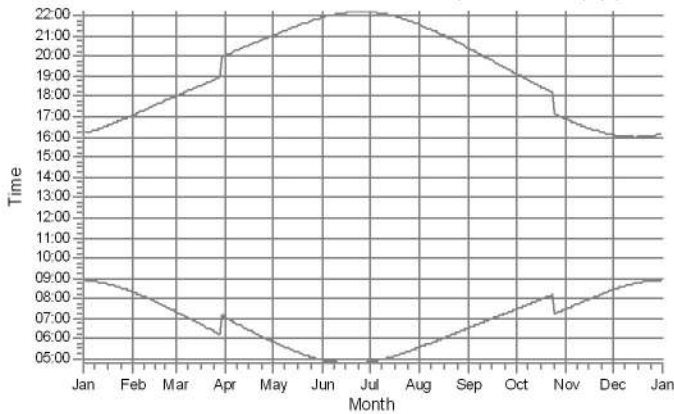
1: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)



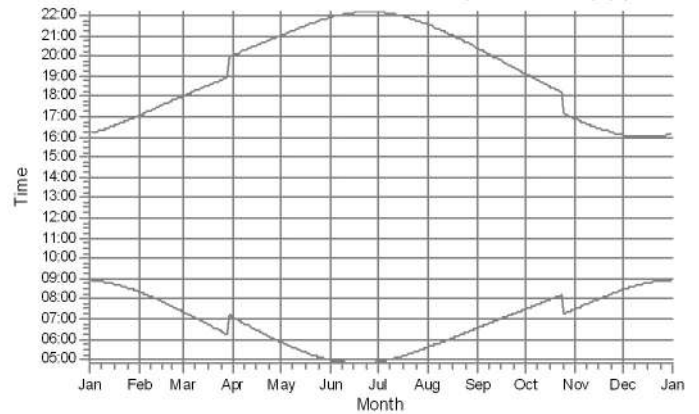
2: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)



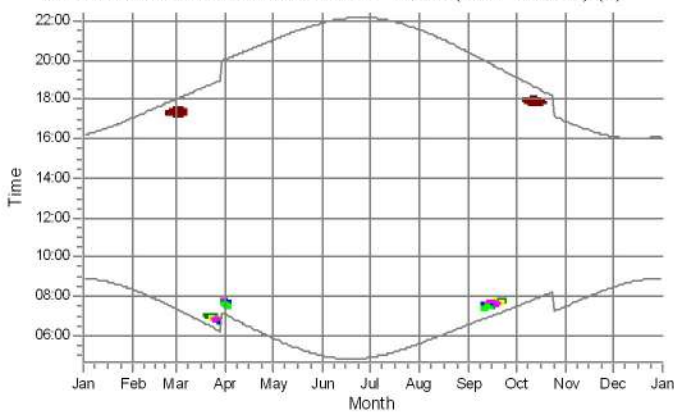
3: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)



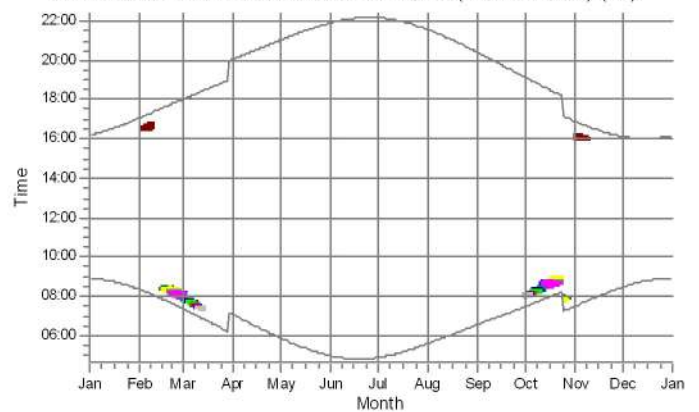
4: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)



5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)



6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)*
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)*
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)*
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)*
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)*
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)*

- G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)*
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)*
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)*
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)*
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)*
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)*

* Results reduced by flicker curtailment

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:

2021.06.16 13:36/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E66 Shut downWTG: 1 - ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
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20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

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Calculated:
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SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E66 Shut downWTG: 2 - ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1				18:49-19:17								
2				18:48-19:17								
3				18:47-19:17								
4				18:46-19:17								
5				18:47-19:17								
6				18:46-19:16								
7				18:47-19:16 07:12-07:14								
8				18:46-19:14 07:09-07:14								
9				18:47-19:14 07:07-07:14								
10				18:48-19:12 07:04-07:13								
11				18:49-19:11 07:02-07:12								
12				18:50-19:09 07:00-07:09								
13				18:52-19:07 06:57-07:07								
14				18:56-19:04 06:55-07:06								
15				06:52-07:01								
16				06:52-07:00								
17				06:54-06:58								
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

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Calculated:

2021.06.16 13:36/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E66 Shut downWTG: 3 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

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Calculated:

2021.06.16 13:36/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E66 Shut downWTG: 4 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

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Calculated:

2021.06.16 13:36/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E66 Shut downWTG: 5 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:

2021.06.16 13:36/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E66 Shut downWTG: 6 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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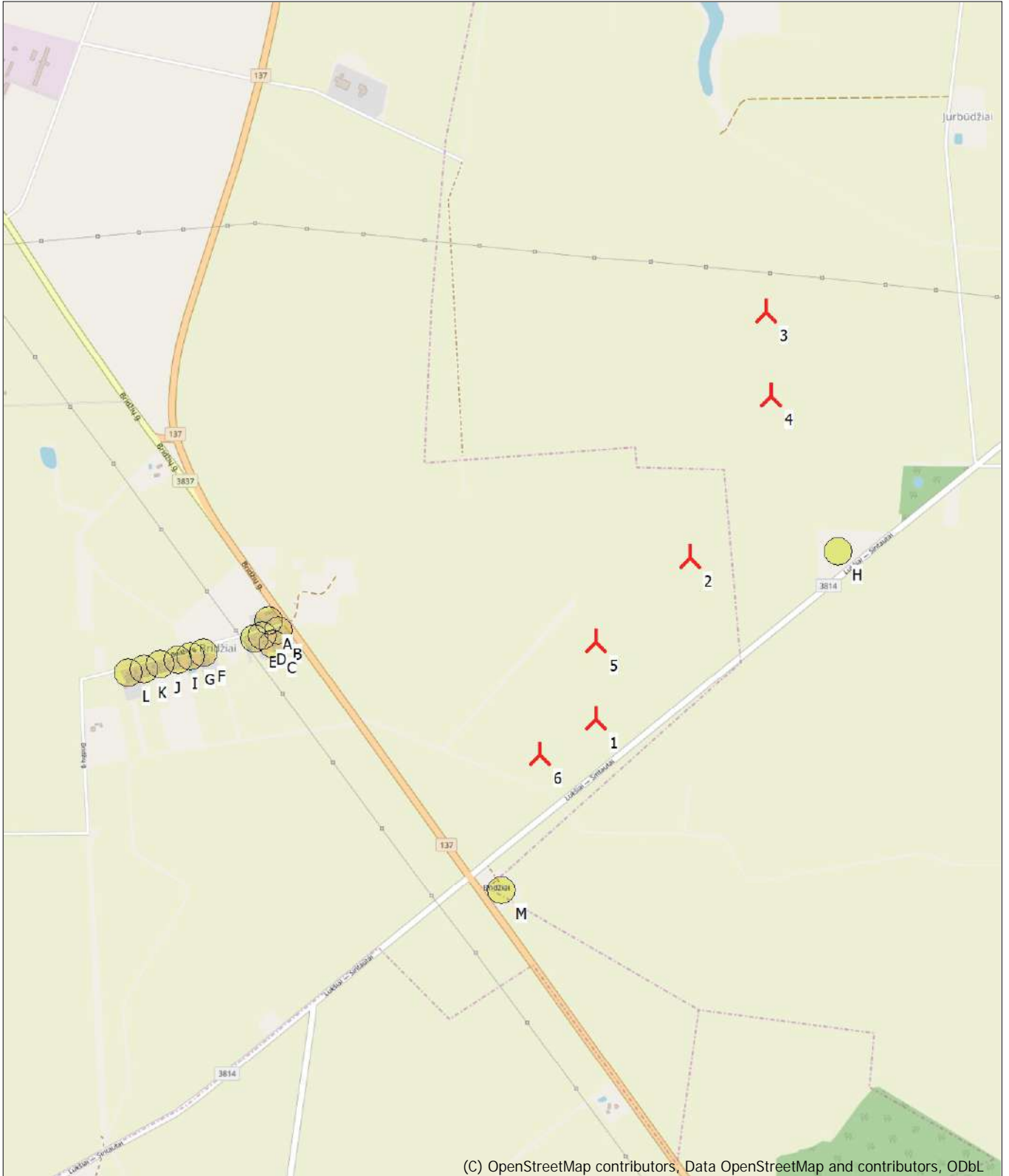
Raminta Survilø / r.survile@infraplanas.lt

Calculated:

2021.06.16 13:36/3.4.415

SHADOW - Map

Calculation: Planuojamos Enercon E66 Shut down



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL

0 250 500 750 1000m

Map: EMD OpenStreetMap, Print scale 1:20.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 441.861 North: 6.087.769

New WTG

Shadow receptor

Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Main Result

Calculation: Planuojamos Enercon E70

Assumptions for shadow calculations

Maximum distance for influence

Calculate only when more than 20 % of sun is covered by the blade

Please look in WTG table

Minimum sun height over horizon for influence 3 °

Day step for calculation 1 days

Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time

0	1	Sum
4.380	4.380	8.760

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:

Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo

Obstacles used in calculation

Eye height for map: 1,5 m

Grid resolution: 1,0 m

All coordinates are in

Lithuanian TM LKS94-LKS94 (LT)

WTGs



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL

Scale 1:40.000

New WTG

Shadow receptor

Y	X	Z	Row data/Description	WTG type			Shadow data				
				Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Calculation distance [m]	RPM [RPM]
1	442.261	6.087.347	50,0 ENERCON E-70 E4 2000 71.0 !O! hub...	No	ENERCON	E-70 E4-2.000	2.000	71,0	85,0	1.643	20,0
2	442.609	6.087.922	50,0 ENERCON E-70 E4 2000 71.0 !O! hub...	No	ENERCON	E-70 E4-2.000	2.000	71,0	85,0	1.643	20,0
3	442.891	6.088.803	50,3 ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
4	442.908	6.088.497	50,0 ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
5	442.265	6.087.626	50,0 ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
6	442.058	6.087.221	50,0 ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5

Shadow receptor-Input

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Calculation Results

Shadow receptor

Shadow, expected values

No.	Shadow hours per year [h/year]
A	3:32
B	3:59

To be continued on next page...

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Main Result

Calculation: Planuojamos Enercon E70

...continued from previous page

Shadow, expected values

No.	Shadow hours per year [h/year]
C	3:59
D	3:27
E	3:12
F	1:56
G	1:41
H	8:56
I	1:31
J	0:53
K	0:46
L	0:23
M	0:00

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Expected [h/year]
1	ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)	13:32	3:43
2	ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)	19:07	7:36
3	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)	0:00	0:00
4	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)	0:00	0:00
5	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)	14:21	4:46
6	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)	18:05	4:43

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:46 (1) 20:03	07:03 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (1) 20:05	07:00 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (1) 20:07	06:57 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (1) 20:09	06:55 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	07:37 (1) 20:11	06:52 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:37 (1) 20:13	06:50 21:11	04:54 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	07:37 (1) 20:15	06:47 21:13	04:53 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	07:39 (1) 20:17	06:45 21:15	04:52 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:46 (1) 20:19	06:42 21:17	04:52 22:03
10	08:49 16:22	08:03 17:23	06:58 18:20	07:39 (1) 20:21	06:40 21:19	04:51 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	07:46 (1) 20:23	06:37 21:20	04:51 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	07:39 (1) 20:25	06:35 21:22	04:50 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	07:46 (1) 20:27	06:33 21:24	04:50 22:07
14	08:46 16:29	07:55 17:31	08:22 (6) 18:28	06:30 20:29	05:24 21:26	04:50 22:07
15	08:45 16:31	07:53 17:33	08:19 (6) 18:30	06:28 20:31	05:23 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	08:17 (6) 18:32	06:25 20:33	05:21 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	08:15 (6) 18:34	06:23 20:34	05:19 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	08:12 (6) 18:36	06:20 20:36	05:17 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	08:10 (6) 18:38	07:00 (5) 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	08:10 (6) 18:40	06:57 (5) 20:40	05:14 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	08:10 (6) 18:42	06:55 (5) 20:42	05:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	08:11 (6) 18:44	06:52 (5) 20:44	05:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	08:12 (6) 18:46	06:50 (5) 20:46	05:10 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	08:14 (6) 18:48	06:47 (5) 20:48	05:08 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	08:22 (6) 18:50	06:47 (5) 20:50	05:07 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	06:18 18:52	06:48 (5) 20:52	05:05 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 18:54	06:49 (5) 20:54	05:04 21:47	04:51 22:11
28	08:27 16:56	07:23 18:00	06:13 18:56	06:58 (5) 20:56	05:03 21:49	04:52 22:11
29	08:26 16:58	07:21 18:02	06:11 19:58	05:55 20:58	05:02 21:50	04:52 22:10
30	08:24 17:00	07:19 18:01	07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10
31	08:22 17:02	07:17 18:00	07:05 20:01	21:00	04:59 21:53	22:10
Potential sun hours	244	270	366	422	499	517
Total, worst case		134	171	35		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,91	0,98	0,98		
Total reduction		0,22	0,33	0,39		
Total, real		30	57	14		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December
1	04:54 22:10	05:36 21:32	06:33 20:23	07:03 (2) 19:07	07:29 16:53	08:27 16:06
2	04:54 22:09	05:37 21:30	06:35 20:20	07:03 (2) 19:04	07:31 16:51	08:29 16:05
3	04:55 22:09	05:39 21:29	06:36 20:18	07:05 (2) 19:01	07:32 16:49	08:30 16:05
4	04:56 22:08	05:41 21:27	06:38 20:15	07:06 (2) 18:59	07:34 16:47	08:32 16:04
5	04:57 22:08	05:43 21:25	06:40 20:13	07:08 (2) 18:56	07:36 16:45	08:34 16:03
6	04:58 22:07	05:45 21:23	06:42 20:10	07:11 (2) 18:54	07:38 16:43	08:35 16:03
7	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:14 (1) 16:41	08:36 16:02
8	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	11 16:39	08:38 16:02
9	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	13 16:37	08:39 16:01
10	05:02 22:04	05:52 21:14	06:49 20:00	07:46 18:44	14 16:35	08:40 16:01
11	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:41	11 16:34	08:41 16:01
12	05:05 22:02	05:55 21:10	06:53 19:55	07:50 18:39	9 16:32	08:43 16:00
13	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	5 16:30	08:44 16:00
14	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	1 16:28	08:45 16:00
15	05:08 21:59	06:01 21:03	06:59 19:47	07:56 18:32		08:46 16:00
16	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29		08:47 16:00
17	05:11 21:56	06:05 20:59	07:02 19:42	07:37 (5) 18:27	8 16:23	08:47 16:00
18	05:13 21:55	06:07 20:57	07:04 19:40	07:49 (5) 18:25	3 16:22	08:48 16:00
19	05:14 21:54	06:08 20:54	07:06 19:37	07:50 (5) 18:22	10 16:20	08:49 16:01
20	05:16 21:52	06:10 20:52	07:08 19:35	07:49 (5) 18:20	14 16:19	08:50 16:01
21	05:17 21:51	06:12 20:50	07:10 19:32	07:37 (5) 18:18	16 16:18	08:50 16:01
22	05:19 21:49	06:14 20:47	07:12 19:30	07:49 (5) 18:15	17 16:16	08:51 16:02
23	05:20 21:48	06:16 20:45	07:14 19:27	07:48 (5) 18:13	18 16:15	08:51 16:02
24	05:22 21:46	06:18 20:42	07:16 19:24	07:48 (5) 18:11	17 16:14	08:52 16:03
25	05:24 21:45	06:20 20:40	07:17 19:22	07:46 (5) 17:08	14 16:12	08:52 16:04
26	05:25 21:43	06:22 20:38	07:19 19:19	07:35 (5) 17:06	12 16:11	08:52 16:04
27	05:27 21:41	06:23 20:35	07:21 19:17	07:34 (5) 17:04	9 16:10	08:53 16:05
28	05:29 21:40	06:25 20:33	07:23 19:14	07:49 (5) 17:02	6 16:09	08:53 16:06
29	05:30 21:38	06:27 20:30	07:25 19:12	07:48 (5) 17:00	2 16:08	08:53 16:07
30	05:32 21:36	06:29 20:28	07:27 19:09	07:22 16:57		08:53 16:08
31	05:34 21:34	06:31 20:25	07:29 (2) 07:09 (2)	07:28 16:55		08:53 16:09
Potential sun hours	519	464	383	327	254	227
Total, worst case			3	126	215	
Sun reduction			0,52	0,40	0,31	
Oper. time red.			1,00	1,00	1,00	
Wind dir. red.			0,98	1,00	0,93	
Total reduction			0,51	0,39	0,28	
Total, real			2	49	61	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (1) 07:46 (1)	06:57 20:07	05:46 21:05
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (1) 07:46 (1)	06:55 20:09	05:44 21:07
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 07:47 (1)	06:52 20:11	05:42 21:09
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:47 (1)	06:50 20:13	05:40 21:11
7	08:51 16:18	08:09 17:16	07:06 18:14	07:32 (1) 07:46 (1)	06:47 20:15	05:38 21:13
8	08:50 16:19	08:07 17:18	07:03 18:16	07:33 (1) 07:46 (1)	06:45 20:17	05:36 21:15
9	08:50 16:21	08:05 17:21	07:01 18:18	07:33 (1) 07:44 (1)	06:42 20:19	07:07 (2) 21:17
10	08:49 16:22	08:03 17:23	06:58 18:20	07:35 (1) 07:43 (1)	06:40 20:21	07:04 (2) 21:19
11	08:48 16:24	08:01 17:25	06:56 18:22	07:43 (1) 20:23	07:02 (2) 07:09 (2)	05:30 21:20
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:00 (2) 07:09 (2)	05:28 21:22
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	06:58 (2) 07:07 (2)	05:26 21:24
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	06:59 (2) 07:06 (2)	05:24 21:26
15	08:45 16:31	07:53 17:33	08:19 (6) 08:21 (6)	06:46 18:30	06:28 20:31	05:23 21:28
16	08:44 16:33	07:50 17:35	08:17 (6) 08:23 (6)	06:43 18:32	06:25 20:33	05:21 21:29
17	08:42 16:34	07:48 17:37	08:15 (6) 08:24 (6)	06:41 18:34	06:23 20:34	05:19 21:31
18	08:41 16:36	07:46 17:39	08:12 (6) 08:24 (6)	06:38 18:36	06:20 20:36	05:17 21:33
19	08:40 16:38	07:44 17:42	08:10 (6) 08:25 (6)	06:36 18:38	06:18 20:38	05:16 21:35
20	08:39 16:40	07:41 17:44	08:08 (6) 08:26 (6)	06:33 18:40	06:16 20:40	05:14 21:36
21	08:38 16:42	07:39 17:46	08:06 (6) 08:25 (6)	06:31 18:42	06:13 20:42	05:13 21:38
22	08:36 16:44	07:37 17:48	08:07 (6) 08:25 (6)	06:28 18:44	06:11 20:44	05:11 21:40
23	08:35 16:46	07:35 17:50	08:07 (6) 08:24 (6)	06:25 18:46	06:09 20:46	05:10 21:41
24	08:33 16:48	07:32 17:52	08:08 (6) 08:23 (6)	06:23 18:48	06:06 20:48	05:08 21:43
25	08:32 16:50	07:30 17:54	08:08 (6) 08:21 (6)	06:20 18:50	06:04 20:50	05:07 21:44
26	08:30 16:52	07:28 17:56	08:11 (6) 08:19 (6)	06:18 18:52	06:02 20:52	05:05 21:46
27	08:29 16:54	07:25 17:58	06:15 18:54	06:40 (5) 06:56 (5)	05:59 20:54	05:04 21:47
28	08:27 16:56	07:23 18:00	06:13 18:56	06:41 (5) 06:56 (5)	05:57 20:56	05:03 21:49
29	08:26 16:58	07:21 18:02	06:11 19:58	07:41 (5) 07:54 (5)	05:55 20:58	05:02 21:50
30	08:24 17:00	07:19 18:04	07:08 20:00	07:43 (5) 07:52 (5)	05:53 21:00	05:00 21:52
31	08:22 17:02	07:17 18:06	07:05 20:01	07:52 (5)	21:00	04:59 21:53
Potential sun hours	244	270	366	422	499	517
Total, worst case		152	188	37		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,91	0,99	0,98		
Total reduction		0,22	0,33	0,38		
Total, real		34	63	14		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December		
1	04:54	05:36	06:33	07:01 (2)	07:29	07:30	08:27	
	22:10	21:32	20:23	7 07:08 (2)	19:07	16:53	16:06	
2	04:54	05:37	06:35	07:03 (2)	07:31	07:32	08:29	
	22:09	21:30	20:20	4 07:07 (2)	19:04	16:51	16:05	
3	04:55	05:39	06:36	07:05 (2)	07:32	08:14 (1)	08:30	
	22:09	21:29	20:18	1 07:06 (2)	19:01	6 08:20 (1)	16:49	16:05
4	04:56	05:41	06:38	07:34	07:34	08:12 (1)	07:36	08:32
	22:08	21:27	20:15	18:59	10 08:22 (1)	16:47	16:04	
5	04:57	05:43	06:40	07:36	08:10 (1)	07:38	08:33	
	22:08	21:25	20:13	18:56	13 08:23 (1)	16:45	16:03	
6	04:58	05:45	06:42	07:38	08:09 (1)	07:40	08:35	
	22:07	21:23	20:10	18:54	14 08:23 (1)	16:43	16:03	
7	04:59	05:46	06:44	07:40	08:09 (1)	07:42	08:36	
	22:06	21:21	20:08	18:51	14 08:23 (1)	16:41	16:02	
8	05:00	05:48	06:46	07:42	08:10 (1)	07:44	08:38	
	22:06	21:18	20:05	18:49	13 08:23 (1)	16:39	16:02	
9	05:01	05:50	06:48	07:44	08:12 (1)	07:46	08:39	
	22:05	21:16	20:03	18:46	10 08:22 (1)	16:37	16:01	
10	05:02	05:52	06:49	07:46	08:14 (1)	07:48	08:40	
	22:04	21:14	20:00	18:44	7 08:21 (1)	16:35	16:01	
11	05:03	05:54	06:51	07:48	08:16 (1)	07:50	08:41	
	22:03	21:12	19:58	18:41	3 08:19 (1)	16:34	16:01	
12	05:05	05:55	06:53	07:50	07:50	07:52	08:43	
	22:02	21:10	19:55	18:39	16:32	16:00		
13	05:06	05:57	06:55	07:35 (5)	07:52	07:54	08:44	
	22:01	21:08	19:53	8 07:43 (5)	18:37	16:30	16:00	
14	05:07	05:59	06:57	07:32 (5)	07:54	07:56	08:45	
	22:00	21:06	19:50	12 07:44 (5)	18:34	16:28	16:00	
15	05:08	06:01	06:59	07:31 (5)	07:56	08:46 (6)	08:46	
	21:59	21:03	19:47	14 07:45 (5)	18:32	3 08:49 (6)	16:27	16:00
16	05:10	06:03	07:01	07:30 (5)	07:58	08:42 (6)	08:00	08:47
	21:58	21:01	19:45	16 07:46 (5)	18:29	10 08:52 (6)	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:40 (6)	08:02	08:47
	21:56	20:59	19:42	16 07:46 (5)	18:27	14 08:54 (6)	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:39 (6)	08:04	08:48
	21:55	20:57	19:40	14 07:46 (5)	18:25	16 08:55 (6)	16:22	16:00
19	05:14	06:08	07:06	07:33 (5)	08:04	08:38 (6)	08:06	08:49
	21:54	20:54	19:37	11 07:44 (5)	18:22	17 08:55 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:37 (6)	08:08	08:50
	21:52	20:52	19:35	8 07:43 (5)	18:20	18 08:55 (6)	16:19	16:01
21	05:17	06:12	07:10	07:37 (5)	08:08	08:37 (6)	08:10	08:50
	21:51	20:50	19:32	5 07:42 (5)	18:18	18 08:55 (6)	16:18	16:01
22	05:19	06:14	07:12	07:39 (5)	08:10	08:39 (6)	08:12	08:51
	21:49	20:47	19:30	1 07:40 (5)	18:15	17 08:56 (6)	16:16	16:02
23	05:20	06:16	07:14	08:12	08:41 (6)	08:13	08:51	
	21:48	20:45	19:27	18:13	14 08:55 (6)	16:15	16:02	
24	05:22	06:18	07:16	08:14	08:43 (6)	08:15	08:52	
	21:46	20:42	19:24	18:11	11 08:54 (6)	16:14	16:03	
25	05:24	06:20	07:17	07:16	07:45 (6)	08:17	08:52	
	21:45	20:40	19:22	17:08	8 07:53 (6)	16:12	16:04	
26	05:25	06:22	07:19	07:18	07:47 (6)	08:19	08:52	
	21:43	20:38	19:19	17:06	5 07:52 (6)	16:11	16:04	
27	05:27	06:23	07:21	07:20	07:49 (6)	08:21	08:53	
	21:41	20:35	19:17	17:04	1 07:50 (6)	16:10	16:05	
28	05:29	06:25	07:23	07:22	08:22	08:22	08:53	
	21:40	20:33	19:14	17:02	16:09	16:06		
29	05:30	06:27	07:00 (2)	07:25	07:24	08:24	08:53	
	21:38	20:30	7 07:07 (2)	19:12	17:00	16:08	16:07	
30	05:32	06:29	06:58 (2)	07:27	07:26	08:26	08:53	
	21:36	20:28	10 07:08 (2)	19:09	16:57	16:07	16:08	
31	05:34	06:31	06:59 (2)	07:28	07:28	08:53	08:53	
	21:34	20:25	9 07:08 (2)	16:55	16:55	16:09	16:09	
Potential sun hours	519	464	383	327	254	227		
Total, worst case		26	117	242				
Sun reduction		0,52	0,40	0,31				
Oper. time red.		1,00	1,00	1,00				
Wind dir. red.		0,98	1,00	0,94				
Total reduction		0,50	0,39	0,29				
Total, real		13	46	69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:59 (6) 20:03	07:03 20:03	07:33 (5) 21:02
2	08:53 16:11	08:19 17:06	07:18 18:04	08:00 (6) 20:05	07:00 20:05	07:33 (5) 21:03
3	08:52 16:13	08:17 17:08	07:16 18:06	08:09 (6) 20:07	06:57 20:07	07:36 (5) 21:05
4	08:52 16:14	08:15 17:10	07:13 18:08	07:13 20:09	06:55 20:09	07:41 (5) 21:07
5	08:52 16:15	08:13 17:12	07:11 18:10	07:11 20:11	06:52 20:11	07:41 (5) 21:09
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 20:13	06:50 20:13	07:41 (5) 21:11
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 20:15	06:47 20:15	07:41 (5) 21:13
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 20:17	06:45 20:17	07:41 (5) 21:15
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 20:19	06:42 20:19	07:41 (5) 21:17
10	08:49 16:22	08:03 17:23	06:58 18:20	07:24 (1) 20:21	06:40 20:21	07:41 (5) 21:19
11	08:48 16:24	08:01 17:25	06:56 18:22	07:23 (1) 20:23	06:37 20:23	07:41 (5) 21:20
12	08:47 16:26	07:59 17:27	06:53 18:24	07:24 (1) 20:25	06:35 20:25	07:00 (2) 21:22
13	08:46 16:27	07:57 17:29	06:51 18:26	07:25 (1) 20:27	06:33 20:27	07:03 (2) 21:24
14	08:46 16:29	07:55 17:31	06:48 18:28	07:34 (1) 20:29	06:30 20:29	07:02 (2) 21:26
15	08:45 16:31	07:53 17:33	06:46 18:30	07:32 (1) 20:31	06:28 20:31	07:02 (2) 21:28
16	08:44 16:33	07:50 17:35	06:43 18:32	07:34 (1) 20:33	06:25 20:33	07:01 (2) 21:29
17	08:42 16:34	07:48 17:37	06:41 18:34	07:34 (1) 20:35	06:23 20:35	07:01 (2) 21:31
18	08:41 16:36	07:46 17:39	06:38 18:36	07:34 (1) 20:37	06:20 20:37	06:58 (2) 21:33
19	08:40 16:38	07:44 17:42	06:36 18:38	07:34 (1) 20:39	06:18 20:39	06:58 (2) 21:35
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	06:16 20:40	06:58 (2) 21:36
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	06:13 20:42	06:58 (2) 21:38
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	06:11 20:44	06:58 (2) 21:40
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	06:09 20:46	06:58 (2) 21:42
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	06:06 20:48	06:58 (2) 21:44
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	06:04 20:50	06:58 (2) 21:46
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	06:02 20:52	06:58 (2) 21:48
27	08:29 16:54	07:25 17:58	06:15 18:54	06:00 20:54	06:00 20:54	06:58 (2) 21:50
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:57 20:56	06:58 (2) 21:52
29	08:26 16:58	07:21 18:02	06:11 18:58	05:55 20:58	05:55 20:58	06:58 (2) 21:54
30	08:24 17:00	07:19 18:04	06:09 19:00	05:53 21:00	05:53 21:00	06:58 (2) 21:56
31	08:22 17:02	07:17 18:06	06:07 19:02	05:51 21:02	05:51 21:02	06:58 (2) 21:58
Potential sun hours	244	270	366	422	499	517
Total, worst case		124	178	65		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,93	0,98	0,98		
Total reduction		0,23	0,33	0,39		
Total, real		28	59	25		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:36	06:33	07:29	08:04 (1)	07:30	08:27	
	22:10	21:32	20:23	19:07	18:15 (1)	16:53	16:06	
2	04:54	05:37	06:35	07:31	08:02 (1)	07:32	08:29	
	22:09	21:30	20:20	19:04	18:15 (1)	16:51	16:05	
3	04:55	05:39	06:36	07:32	08:02 (1)	07:34	08:30	
	22:09	21:29	20:18	19:01	18:16 (1)	16:49	16:05	
4	04:56	05:41	06:38	07:34	08:02 (1)	07:36	08:32	
	22:08	21:27	20:15	18:59	18:15 (1)	16:47	16:04	
5	04:57	05:43	06:40	07:36	08:04 (1)	07:38	08:33	
	22:08	21:25	20:13	18:56	18:15 (1)	16:45	16:03	
6	04:58	05:45	06:42	07:38	08:06 (1)	07:40	08:35	
	22:07	21:23	20:10	18:54	18:14 (1)	16:43	16:03	
7	04:59	05:46	06:44	07:40	08:08 (1)	07:42	08:36	
	22:06	21:21	20:08	18:51	18:12 (1)	16:41	16:02	
8	05:00	05:48	06:46	07:42	08:12 (1)	07:44	08:38	
	22:06	21:18	20:05	18:49		16:39	16:02	
9	05:01	05:50	06:48	07:30 (5)	07:44	07:46	08:39	
	22:05	21:16	20:03	4 07:34 (5)	18:46	16:37	16:01	
10	05:02	05:52	06:49	07:27 (5)	07:46	07:48	08:40	
	22:04	21:14	20:00	10 07:37 (5)	18:44	16:35	16:01	
11	05:03	05:54	06:51	07:25 (5)	07:48	08:36 (6)	07:50	08:41
	22:03	21:12	19:58	13 07:38 (5)	18:41	5 08:41 (6)	16:34	16:01
12	05:05	05:55	06:53	07:24 (5)	07:50	08:33 (6)	07:52	08:43
	22:02	21:10	19:55	15 07:39 (5)	18:39	11 08:44 (6)	16:32	16:00
13	05:06	05:57	06:55	07:23 (5)	07:52	08:31 (6)	07:54	08:44
	22:01	21:08	19:53	16 07:39 (5)	18:37	14 08:45 (6)	16:30	16:00
14	05:07	05:59	06:57	07:24 (5)	07:54	08:30 (6)	07:56	08:45
	22:00	21:06	19:50	14 07:38 (5)	18:34	16 08:46 (6)	16:28	16:00
15	05:09	06:01	06:59	07:26 (5)	07:56	08:29 (6)	07:58	08:46
	21:59	21:03	19:47	12 07:38 (5)	18:32	17 08:46 (6)	16:27	16:00
16	05:10	06:03	07:01	07:28 (5)	07:58	08:28 (6)	08:00	08:47
	21:58	21:01	19:45	9 07:37 (5)	18:29	19 08:47 (6)	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:28 (6)	08:02	08:47
	21:56	20:59	19:42	6 07:36 (5)	18:27	18 08:46 (6)	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:30 (6)	08:04	08:48
	21:55	20:57	19:40	3 07:35 (5)	18:25	16 08:46 (6)	16:22	16:00
19	05:14	06:08	07:06		08:04	08:32 (6)	08:06	08:49
	21:54	20:54	19:37		18:22	13 08:45 (6)	16:20	16:01
20	05:16	06:10	07:08		08:06	08:34 (6)	08:08	08:50
	21:52	20:52	19:35		18:20	10 08:44 (6)	16:19	16:01
21	05:17	06:12	07:10		08:08	08:36 (6)	08:10	08:50
	21:51	20:50	19:32		18:18	7 08:43 (6)	16:18	16:01
22	05:19	06:14	07:12		08:10	08:39 (6)	08:12	08:51
	21:49	20:47	19:30		18:15	3 08:42 (6)	16:16	16:02
23	05:20	06:16	07:14		08:12		08:13	08:51
	21:48	20:45	19:27		18:13		16:15	16:02
24	05:22	06:18	07:16		08:14		08:15	08:52
	21:46	20:42	19:24		18:11		16:14	16:03
25	05:24	06:20	07:17		07:16		08:17	08:52
	21:45	20:40	19:22		17:08		16:12	16:04
26	05:25	06:22	06:55 (2)	07:19	07:18		08:19	08:52
	21:43	20:38	5 07:00 (2)	19:19	17:06		16:11	16:04
27	05:27	06:23	06:54 (2)	07:21	07:20		08:21	08:53
	21:41	20:35	8 07:02 (2)	19:17	17:04		16:10	16:05
28	05:29	06:25	06:54 (2)	07:23	07:22		08:22	08:53
	21:40	20:33	9 07:03 (2)	19:14	17:02		16:09	16:06
29	05:30	06:27	06:56 (2)	07:25	07:24		08:24	08:53
	21:38	20:30	7 07:03 (2)	19:12	17:00		16:08	16:07
30	05:32	06:29	06:58 (2)	07:27	08:05 (1)	07:26	08:26	08:53
	21:36	20:28	5 07:03 (2)	19:09	8 08:13 (1)	16:57	16:07	16:08
31	05:34	06:31	06:59 (2)		07:28			08:53
	21:34	20:25	3 07:02 (2)		16:55			16:09
Potential sun hours	519	464	383		327	254	227	
Total, worst case			37		110		223	
Sun reduction			0,52		0,40		0,31	
Oper. time red.			1,00		1,00		1,00	
Wind dir. red.			0,97		1,00		0,95	
Total reduction			0,50		0,39		0,29	
Total, real			19		43		65	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53	08:20	07:20	08:06 (6)	07:03	05:51
	16:10	17:04	18:02	2	08:08 (6)	20:03
2	08:53	08:19	07:18		07:00	05:48
	16:11	17:06	18:04		20:05	21:03
3	08:52	08:17	07:16		06:57	05:46
	16:13	17:08	18:06		20:07	21:05
4	08:52	08:15	07:13		06:55	05:44
	16:14	17:10	18:08		20:09	21:07
5	08:52	08:13	07:11		07:36 (1)	06:52
	16:15	17:12	18:10	4	07:40 (1)	20:11
6	08:51	08:11	07:08		07:33 (1)	06:50
	16:17	17:14	18:12	7	07:40 (1)	20:13
7	08:51	08:09	07:06		07:30 (1)	06:47
	16:18	17:16	18:14	10	07:40 (1)	20:15
8	08:50	08:07	07:03		07:28 (1)	06:45
	16:19	17:18	18:16	13	07:41 (1)	20:17
9	08:50	08:05	07:01		07:27 (1)	06:42
	16:21	17:21	18:18	13	07:40 (1)	20:19
10	08:49	08:03	06:58		07:28 (1)	06:40
	16:22	17:23	18:20	12	07:40 (1)	20:21
11	08:48	08:01	06:56		07:28 (1)	06:37
	16:24	17:25	18:22	10	07:38 (1)	20:23
12	08:47	07:59	06:53		07:31 (1)	06:35
	16:26	17:27	18:24	5	07:36 (1)	20:25
13	08:46	07:57	06:51		06:33	06:33
	16:27	17:29	18:26		20:27	9
14	08:46	07:55	06:48		06:30	06:58 (2)
	16:29	17:31	18:28		20:29	7
15	08:45	07:53	06:46		06:28	07:05 (2)
	16:31	17:33	18:30		20:31	05:23
16	08:44	07:50	06:43		06:25	21:28
	16:33	17:35	18:32		20:33	22:08
17	08:42	07:48	06:41		06:23	05:21
	16:34	17:37	18:34		20:34	21:29
18	08:41	07:46	06:38		06:20	05:19
	16:36	17:39	18:36		20:36	22:09
19	08:40	07:44	08:10 (6)	06:36	06:18	05:17
	16:38	17:42	5	08:15 (6)	18:38	21:35
20	08:39	07:41	08:08 (6)	06:33	06:16	22:10
	16:40	17:44	8	08:16 (6)	18:40	05:14
21	08:38	07:39	08:05 (6)	06:31	06:13	04:49
	16:42	17:46	11	08:16 (6)	18:42	21:36
22	08:36	07:37	08:03 (6)	06:28	06:11	05:13
	16:44	17:48	14	08:17 (6)	18:44	22:11
23	08:35	07:35	08:00 (6)	06:25	06:50 (5)	06:09
	16:46	17:50	16	08:16 (6)	18:46	3
24	08:33	07:32	07:59 (6)	06:23	06:47 (5)	20:46
	16:48	17:52	17	08:16 (6)	18:48	06:06
25	08:32	07:30	07:59 (6)	06:20	06:53 (5)	20:48
	16:50	17:54	16	08:15 (6)	18:50	6
26	08:30	07:28	08:00 (6)	06:18	06:44 (5)	06:04
	16:52	17:56	15	08:15 (6)	18:52	9
27	08:29	07:25	08:01 (6)	06:15	06:54 (5)	20:50
	16:54	17:58	13	08:14 (6)	18:54	12
28	08:27	07:23	08:02 (6)	06:13	06:39 (5)	05:59
	16:56	18:00	10	08:12 (6)	18:56	14
29	08:26			07:10	06:53 (5)	20:56
	16:58			19:58	14	07:37 (5)
30	08:24			07:08	07:51 (5)	05:55
	17:00			20:00	11	07:39 (5)
31	08:22			07:05	07:50 (5)	21:00
	17:02			20:01	7	07:40 (5)
Potential sun hours	244	270	366	422	499	517
Total, worst case		125	167	31		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,93	0,99	0,98		
Total reduction		0,23	0,34	0,38		
Total, real		28	56	12		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:36	06:33	07:01 (2)	07:29	07:30	08:27	
	22:10	21:32	20:23	5 07:06 (2)	19:07	16:53	16:06	
2	04:54	05:37	06:35	07:03 (2)	07:31	08:08 (1)	07:32	08:29
	22:09	21:30	20:20	3 07:06 (2)	19:04	8 08:16 (1)	16:51	16:05
3	04:55	05:39	06:36	07:32	07:32	08:06 (1)	07:34	08:30
	22:09	21:29	20:18	19:01	11 08:17 (1)	16:49	16:05	
4	04:56	05:41	06:38	07:34	07:34	08:05 (1)	07:36	08:32
	22:08	21:27	20:15	18:59	13 08:18 (1)	16:47	16:04	
5	04:57	05:43	06:40	07:36	07:36	08:04 (1)	07:38	08:33
	22:08	21:25	20:13	18:56	14 08:18 (1)	16:45	16:03	
6	04:58	05:45	06:42	07:38	07:38	08:06 (1)	07:40	08:35
	22:07	21:23	20:10	18:54	11 08:17 (1)	16:43	16:03	
7	04:59	05:46	06:44	07:40	07:40	08:08 (1)	07:42	08:36
	22:06	21:21	20:08	18:51	9 08:17 (1)	16:41	16:02	
8	05:00	05:48	06:46	07:42	07:42	08:10 (1)	07:44	08:38
	22:06	21:18	20:05	18:49	6 08:16 (1)	16:39	16:02	
9	05:01	05:50	06:48	07:44	07:44	08:12 (1)	07:46	08:39
	22:05	21:16	20:03	18:46	2 08:14 (1)	16:37	16:01	
10	05:02	05:52	06:49	07:46	07:46	07:48	08:40	
	22:04	21:14	20:00	18:44	16:35	16:01		
11	05:03	05:54	06:51	07:48	07:48	07:50	08:41	
	22:03	21:12	19:58	18:41	16:34	16:01		
12	05:05	05:55	06:53	07:33 (5)	07:50	07:52	08:43	
	22:02	21:10	19:55	6 07:39 (5)	18:39	16:32	16:00	
13	05:06	05:57	06:55	07:30 (5)	07:52	08:37 (6)	07:54	08:44
	22:01	21:08	19:53	11 07:41 (5)	18:37	7 08:44 (6)	16:30	16:00
14	05:07	05:59	06:57	07:28 (5)	07:54	08:34 (6)	07:56	08:45
	22:00	21:06	19:50	13 07:41 (5)	18:34	12 08:46 (6)	16:28	16:00
15	05:09	06:01	06:59	07:27 (5)	07:56	08:33 (6)	07:58	08:46
	21:59	21:03	19:47	15 07:42 (5)	18:32	14 08:47 (6)	16:27	16:00
16	05:10	06:03	07:01	07:28 (5)	07:58	08:31 (6)	08:00	08:47
	21:58	21:01	19:45	14 07:42 (5)	18:29	17 08:48 (6)	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:31 (6)	08:02	08:47
	21:56	20:59	19:42	12 07:42 (5)	18:27	17 08:48 (6)	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:30 (6)	08:04	08:48
	21:55	20:57	19:40	10 07:42 (5)	18:25	18 08:48 (6)	16:22	16:00
19	05:14	06:08	07:06	07:33 (5)	08:04	08:32 (6)	08:06	08:49
	21:54	20:54	19:37	7 07:40 (5)	18:22	15 08:47 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:34 (6)	08:08	08:50
	21:52	20:52	19:35	4 07:39 (5)	18:20	13 08:47 (6)	16:19	16:01
21	05:17	06:12	07:10	08:08	08:36 (6)	08:10	08:50	
	21:51	20:50	19:32	18:18	10 08:46 (6)	16:18	16:01	
22	05:19	06:14	07:12	08:10	08:39 (6)	08:12	08:51	
	21:49	20:47	19:30	18:15	7 08:46 (6)	16:16	16:02	
23	05:20	06:16	07:14	08:12	08:41 (6)	08:13	08:51	
	21:48	20:45	19:27	18:13	3 08:44 (6)	16:15	16:02	
24	05:22	06:18	07:16	08:14	08:43	08:15	08:52	
	21:46	20:42	19:24	18:11	16:14	16:03		
25	05:24	06:20	07:17	07:16	08:17	08:17	08:52	
	21:45	20:40	19:22	17:08	16:12	16:04		
26	05:25	06:22	07:19	07:18	08:19	08:19	08:52	
	21:43	20:38	19:19	17:06	16:11	16:04		
27	05:27	06:23	07:21	07:20	08:21	08:21	08:53	
	21:41	20:35	19:17	17:04	16:10	16:05		
28	05:29	06:25	07:23	07:22	08:22	08:22	08:53	
	21:40	20:33	19:14	17:02	16:09	16:06		
29	05:30	06:27	06:59 (2)	07:25	07:24	08:24	08:53	
	21:38	20:30	7 07:06 (2)	19:12	17:00	16:08	16:07	
30	05:32	06:29	06:58 (2)	07:27	07:26	08:26	08:53	
	21:36	20:28	9 07:07 (2)	19:09	16:57	16:07	16:08	
31	05:34	06:31	06:59 (2)	07:28	07:28	08:27	08:53	
	21:34	20:25	7 07:06 (2)	16:55	16:09	16:09		
Potential sun hours	519	464	383	327	254	227		
Total, worst case		23	100	207				
Sun reduction		0,52	0,40	0,31				
Oper. time red.		1,00	1,00	1,00				
Wind dir. red.		0,98	1,00	0,95				
Total reduction		0,50	0,39	0,29				
Total, real		12	39	60				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:58 (6) 20:03	07:03 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	08:00 (6) 08:05 (6)	07:00 20:05	05:48 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:36 (1)	06:50 20:13	05:40 21:11
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 07:37 (1)	06:47 20:15	05:38 21:13
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 07:38 (1)	06:45 20:17	05:36 21:15
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 07:37 (1)	06:42 20:19	05:34 21:17
10	08:49 16:22	08:03 17:23	06:58 18:20	07:25 (1) 07:37 (1)	06:40 20:21	05:32 21:19
11	08:48 16:24	08:01 17:25	06:56 18:22	07:25 (1) 07:36 (1)	06:37 20:23	05:30 21:20
12	08:47 16:26	07:59 17:27	06:53 18:24	07:26 (1) 07:35 (1)	06:35 20:25	05:28 21:22
13	08:46 16:27	07:57 17:29	06:51 18:26	07:28 (1) 07:31 (1)	06:33 20:27	05:26 21:24
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	06:58 (2) 07:04 (2)	05:24 21:26
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	08:08 (6) 08:10 (6)	06:33 18:40	06:16 20:40	05:14 21:36
21	08:38 16:42	07:39 17:46	08:05 (6) 08:11 (6)	06:31 18:42	06:13 20:42	05:13 21:38
22	08:36 16:44	07:37 17:48	08:03 (6) 08:12 (6)	06:28 18:44	06:11 20:44	05:11 21:40
23	08:35 16:46	07:35 17:50	08:00 (6) 08:12 (6)	06:25 18:46	06:09 20:46	05:10 21:41
24	08:33 16:48	07:32 17:52	07:58 (6) 08:13 (6)	06:23 18:48	06:47 (5) 06:51 (5)	06:06 20:48
25	08:32 16:50	07:30 17:54	07:55 (6) 08:12 (6)	06:20 18:50	06:44 (5) 06:51 (5)	06:04 20:50
26	08:30 16:52	07:28 17:56	07:55 (6) 08:12 (6)	06:18 18:52	06:42 (5) 06:52 (5)	06:02 20:52
27	08:29 16:54	07:25 17:58	07:56 (6) 08:12 (6)	06:15 18:54	06:39 (5) 06:51 (5)	05:59 20:54
28	08:27 16:56	07:23 18:00	07:56 (6) 08:10 (6)	06:13 18:56	06:37 (5) 06:51 (5)	05:57 20:56
29	08:26 16:58	07:21 18:02	07:54 (6) 08:08 (6)	06:11 18:58	06:35 (5) 06:49 (5)	05:55 20:58
30	08:24 17:00	07:19 18:00	07:52 (6) 08:06 (6)	06:09 19:00	06:33 (5) 06:47 (5)	05:53 20:59
31	08:22 17:02	07:17 18:00	07:50 (6) 08:04 (6)	06:07 19:02	06:31 (5) 06:45 (5)	05:51 21:00
Potential sun hours	244	270	366	422	499	517
Total, worst case		108	164	28		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,94	0,99	0,98		
Total reduction		0,23	0,33	0,38		
Total, real		25	55	11		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:36	06:33	07:01 (2)	07:29	08:06 (1)	07:30	08:27
	22:10	21:32	20:23	5 07:06 (2)	19:07	7 08:13 (1)	16:53	16:06
2	04:54	05:37	06:35	07:03 (2)	07:31	08:04 (1)	07:32	08:29
	22:09	21:30	20:20	2 07:05 (2)	19:04	11 08:15 (1)	16:51	16:05
3	04:55	05:39	06:36	07:32	07:32	08:03 (1)	07:34	08:30
	22:09	21:29	20:18	19:01	12 08:15 (1)	16:49	16:05	
4	04:56	05:41	06:38	07:34	07:34	08:02 (1)	07:36	08:32
	22:08	21:27	20:15	18:59	13 08:15 (1)	16:47	16:04	
5	04:57	05:43	06:40	07:36	07:36	08:04 (1)	07:38	08:34
	22:08	21:25	20:13	18:56	11 08:15 (1)	16:45	16:03	
6	04:58	05:45	06:42	07:38	07:38	08:06 (1)	07:40	08:35
	22:07	21:23	20:10	18:54	8 08:14 (1)	16:43	16:03	
7	04:59	05:46	06:44	07:40	07:40	08:08 (1)	07:42	08:36
	22:06	21:21	20:08	18:51	5 08:13 (1)	16:41	16:02	
8	05:00	05:48	06:46	07:42	07:42	08:10 (1)	07:44	08:38
	22:06	21:18	20:05	18:49	1 08:11 (1)	16:39	16:02	
9	05:01	05:50	06:48	07:44	07:44	07:46	08:39	
	22:05	21:16	20:03	18:46	16:37	16:01		
10	05:02	05:52	06:49	07:46	07:46	07:48	08:40	
	22:04	21:14	20:00	18:44	16:35	16:01		
11	05:03	05:54	06:51	07:48	07:48	07:50	08:41	
	22:03	21:12	19:58	18:41	16:34	16:01		
12	05:05	05:55	06:53	07:30 (5)	07:50	08:33 (6)	07:52	08:43
	22:02	21:10	19:55	8 07:38 (5)	18:39	8 08:41 (6)	16:32	16:00
13	05:06	05:57	06:55	07:28 (5)	07:52	08:30 (6)	07:54	08:44
	22:01	21:08	19:53	12 07:40 (5)	18:37	13 08:43 (6)	16:30	16:00
14	05:07	05:59	06:57	07:26 (5)	07:54	08:29 (6)	07:56	08:45
	22:00	21:06	19:50	14 07:40 (5)	18:34	15 08:44 (6)	16:28	16:00
15	05:09	06:01	06:59	07:26 (5)	07:56	08:28 (6)	07:58	08:46
	21:59	21:03	19:47	14 07:40 (5)	18:32	16 08:44 (6)	16:27	16:00
16	05:10	06:03	07:01	07:28 (5)	07:58	08:27 (6)	08:00	08:47
	21:58	21:01	19:45	12 07:40 (5)	18:29	17 08:44 (6)	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:28 (6)	08:02	08:47
	21:56	20:59	19:42	10 07:40 (5)	18:27	16 08:44 (6)	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:30 (6)	08:04	08:48
	21:55	20:57	19:40	7 07:39 (5)	18:25	14 08:44 (6)	16:22	16:00
19	05:14	06:08	07:06	07:33 (5)	08:04	08:32 (6)	08:06	08:49
	21:54	20:54	19:37	4 07:37 (5)	18:22	11 08:43 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:34 (6)	08:08	08:50
	21:52	20:52	19:35	1 07:36 (5)	18:20	8 08:42 (6)	16:19	16:01
21	05:17	06:12	07:10	08:08	08:08	08:36 (6)	08:10	08:50
	21:51	20:50	19:32	18:18	5 08:41 (6)	16:18	16:01	
22	05:19	06:14	07:12	08:10	08:10	08:39 (6)	08:12	08:51
	21:49	20:47	19:30	18:15	1 08:40 (6)	16:16	16:02	
23	05:20	06:16	07:14	08:12	08:12	08:13	08:51	
	21:48	20:45	19:27	18:13	16:15	16:02		
24	05:22	06:18	07:16	08:14	08:14	08:15	08:52	
	21:46	20:42	19:24	18:11	16:14	16:03		
25	05:24	06:20	07:17	07:16	07:16	08:17	08:52	
	21:45	20:40	19:22	17:08	16:12	16:04		
26	05:25	06:22	07:19	07:18	07:18	08:19	08:52	
	21:43	20:38	19:19	17:06	16:11	16:04		
27	05:27	06:23	07:21	07:20	07:20	08:21	08:53	
	21:41	20:35	19:17	17:04	16:10	16:05		
28	05:29	06:25	07:23	07:22	07:22	08:22	08:53	
	21:40	20:33	19:14	17:02	16:09	16:06		
29	05:30	06:27	06:58 (2)	07:25	07:24	08:24	08:53	
	21:38	20:30	7 07:05 (2)	19:12	17:00	16:08	16:07	
30	05:32	06:29	06:58 (2)	07:27	07:26	08:26	08:53	
	21:36	20:28	8 07:06 (2)	19:09	16:57	16:07	16:08	
31	05:34	06:31	06:59 (2)	07:28	07:28	08:27	08:53	
	21:34	20:25	7 07:06 (2)	16:55	16:09	16:09		
Potential sun hours	519	464	383	327	254	227		
Total, worst case		22	89	192				
Sun reduction		0,52	0,40	0,31				
Oper. time red.		1,00	1,00	1,00				
Wind dir. red.		0,98	1,00	0,95				
Total reduction		0,50	0,39	0,29				
Total, real		11	35	56				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	07:29 (5) 21:02	05:51 21:54	04:58 22:10	04:54 21:32	05:36 20:23	06:33 19:07	07:29 19:07	07:30 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	07:29 (5) 21:03	05:48 21:56	04:57 22:09	04:54 21:30	05:37 20:20	06:35 19:04	07:31 19:04	07:32 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:36 (6) 21:05	05:46 21:57	04:56 22:09	04:55 21:29	05:39 20:18	06:36 19:01	07:33 19:01	07:34 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	07:36 (6) 21:07	05:44 21:58	04:55 22:08	04:56 21:27	05:41 20:15	06:38 18:59	07:34 18:59	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	07:36 (6) 21:09	05:42 21:59	04:55 22:08	04:57 21:25	05:43 20:13	06:40 18:56	07:36 18:56	07:38 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	07:37 (6) 21:11	05:40 22:00	04:54 22:07	05:45 21:23	06:42 20:10	07:38 18:54	07:38 18:54	08:15 (6) 16:43
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	07:49 (6) 21:13	05:38 22:01	04:53 22:06	04:59 21:21	06:44 20:08	07:40 18:51	07:40 18:51	08:13 (6) 16:41
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	07:48 (6) 21:15	05:36 22:02	04:52 22:06	05:00 21:18	06:46 20:05	07:42 18:49	07:42 18:49	08:12 (6) 16:39
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	07:44 (6) 21:17	05:34 22:03	04:52 22:05	05:01 21:16	06:48 20:03	07:44 18:46	07:44 18:46	08:12 (6) 16:37
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	07:44 (6) 21:19	05:32 22:04	04:51 22:04	05:02 21:14	06:49 20:00	07:44 18:44	07:44 18:44	08:14 (6) 16:35
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:20 (1) 21:20	05:30 22:05	04:51 22:03	05:54 21:12	06:51 19:58	07:21 (5) 18:42	07:21 (5) 18:42	08:16 (6) 16:34
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:18 (1) 21:22	05:28 22:06	04:50 22:02	05:05 21:10	06:53 19:55	07:21 (5) 18:39	07:21 (5) 18:39	08:25 (6) 16:32
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	07:15 (1) 21:24	05:26 22:07	04:50 22:01	05:06 21:08	06:57 19:53	07:23 (5) 18:37	07:23 (5) 18:37	08:25 (6) 16:30
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	07:13 (1) 21:26	05:24 22:07	04:50 22:00	05:07 21:06	06:57 19:50	07:24 (5) 18:34	07:24 (5) 18:34	08:24 (6) 16:28
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	07:11 (1) 21:28	05:23 22:08	04:49 21:59	06:01 21:03	06:59 19:47	07:26 (5) 18:32	07:26 (5) 18:32	08:24 (6) 16:27
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	07:12 (1) 21:29	05:21 22:09	04:49 21:58	06:03 21:01	07:01 19:45	07:28 (5) 18:29	07:28 (5) 18:29	08:00 16:25
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	07:14 (1) 21:31	05:19 22:09	04:49 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:00 18:27	08:02 16:23
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	07:17 (1) 21:33	05:17 22:10	04:49 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:02 18:25	08:04 16:22
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	07:18 (1) 21:35	05:16 22:10	04:49 21:54	06:14 20:54	07:06 19:37	08:04 18:22	08:04 18:22	08:06 16:20
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	07:20 (1) 21:36	05:14 22:10	04:49 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:06 18:20	08:08 16:19
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	07:22 (1) 21:38	05:13 22:11	04:49 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:08 18:18	08:10 16:18
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	07:24 (1) 21:40	05:11 22:11	04:49 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:10 18:15	08:12 16:16
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	07:25 (1) 21:41	05:10 22:11	04:49 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:12 18:13	08:13 16:15
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	07:26 (1) 21:43	05:08 22:11	04:50 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:14 18:11	08:15 16:14
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	07:27 (1) 21:44	05:07 22:11	04:50 21:45	06:20 20:40	07:17 19:22	08:14 18:08	08:14 18:08	08:17 16:12
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	07:28 (1) 21:46	05:05 22:11	04:51 21:43	06:22 20:38	07:19 19:19	08:16 18:06	08:16 18:06	08:19 16:11
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	06:39 (5) 21:47	05:04 22:11	04:51 21:41	06:23 20:35	07:21 19:17	08:17 18:00	08:17 18:00	08:21 16:10
28	08:27 16:56	07:23 18:00	07:48 (6) 18:56	06:37 (5) 20:56	06:39 (5) 21:49	05:03 22:11	04:52 21:40	06:25 20:33	07:23 19:14	08:19 18:02	08:19 18:02	08:22 16:09
29	08:26 16:58	07:20 18:00	07:50 (6) 18:56	06:34 (5) 20:55	06:41 (5) 21:50	05:02 22:10	04:52 21:38	06:27 20:30	07:25 19:12	08:20 18:02	08:20 18:02	08:24 16:07
30	08:24 17:00	07:18 18:00	07:32 (5) 19:58	06:32 (5) 20:58	07:34 (5) 21:50	05:00 22:10	04:53 21:38	06:29 20:30	07:27 19:09	08:22 18:02	08:22 18:02	08:26 16:07
31	08:22 17:02	07:16 18:00	07:29 (5) 20:00	06:28 (5) 21:00	07:35 (5) 21:52	04:59 22:10	05:34 21:36	06:31 20:28	07:28 19:09	08:24 18:02	08:24 18:02	08:53 16:08
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case			150			17			84		88	
Sun reduction		0,24	0,34			0,39			0,40		0,31	
Oper. time red.		1,00	1,00			1,00			1,00		1,00	
Wind dir. red.		0,96	0,98			1,00			1,00		0,97	
Total reduction		0,24	0,33			0,39			0,39		0,30	
Total, real		0	50			7			33		26	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: G - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02									
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (6) 20:05	07:00 20:05	07:27 (5) 21:03	05:51 21:56	04:58 22:09	04:54 21:30	05:36 20:20	06:33 19:04	07:29 16:51
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (6) 20:07	06:57 20:07	07:38 (6) 20:13	05:48 21:09	04:57 21:57	05:37 22:09	06:35 20:18	07:31 19:01	07:32 16:49
4	08:52 16:14	08:15 17:10	07:13 18:08	07:36 (6) 20:09	06:55 20:09	07:47 (6) 20:17	05:44 21:07	04:56 21:58	05:41 22:27	06:36 20:15	07:34 18:59	07:36 16:47
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 20:11	06:52 20:11	07:47 (6) 20:13	05:42 21:09	04:55 21:59	05:43 22:08	06:40 20:13	07:36 18:56	07:38 16:45
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (6) 20:13	06:50 20:13	07:46 (6) 20:17	05:40 21:11	04:54 22:00	05:45 22:27	06:42 20:10	07:38 18:54	07:40 16:43
7	08:51 16:18	08:09 17:16	07:06 18:14	07:33 (6) 20:15	06:47 20:15	07:45 (6) 20:15	05:38 21:13	04:53 22:01	05:46 22:21	06:44 20:08	07:40 18:51	07:42 16:41
8	08:50 16:19	08:07 17:18	07:03 18:16	07:34 (6) 20:17	06:45 20:17	07:43 (6) 20:17	05:36 21:15	04:52 22:02	05:48 22:26	06:46 20:05	07:42 18:49	07:44 16:39
9	08:50 16:21	08:05 17:21	07:01 18:18	07:35 (6) 20:19	06:42 20:19	07:40 (6) 20:21	05:34 21:17	04:52 22:03	05:01 22:16	06:48 20:03	07:44 18:46	07:46 16:37
10	08:49 16:23	08:03 17:23	06:58 18:20	07:40 20:21	06:49 20:21	07:40 (6) 20:21	05:32 21:19	04:51 22:04	05:02 22:14	05:52 20:00	07:46 18:44	07:48 16:35
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	06:37 20:23	07:40 (6) 20:23	05:30 21:20	04:51 22:05	05:03 22:12	06:51 19:58	07:48 18:42	07:50 16:34
12	08:47 16:26	07:59 17:27	06:53 18:24	07:18 (1) 20:25	06:35 20:25	07:40 (6) 20:25	05:28 21:22	04:50 22:06	05:05 22:10	05:56 19:55	07:50 18:39	07:52 16:32
13	08:46 16:27	07:57 17:29	06:51 18:26	07:15 (1) 20:27	06:33 20:27	07:40 (6) 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 19:53	07:52 18:37	07:54 16:30
14	08:46 16:29	07:55 17:31	06:48 18:28	07:13 (1) 20:29	06:30 20:29	07:40 (6) 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 19:50	07:54 18:34	07:56 16:28
15	08:45 16:31	07:53 17:33	06:46 18:30	07:10 (1) 20:31	06:28 20:31	07:40 (6) 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 19:47	07:56 18:32	07:58 16:27
16	08:44 16:33	07:50 17:35	06:43 18:32	07:09 (1) 20:33	06:25 20:33	07:40 (6) 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 19:45	07:57 18:29	08:00 16:25
17	08:42 16:34	07:48 17:37	06:41 18:34	07:09 (1) 20:34	06:23 20:34	07:40 (6) 20:34	05:19 21:31	04:49 22:09	05:11 21:56	06:05 19:59	07:02 18:27	08:00 16:23
18	08:41 16:36	07:46 17:39	06:38 18:36	07:16 (1) 20:36	06:20 20:36	07:40 (6) 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25
19	08:40 16:38	07:44 17:42	06:36 18:38	07:16 (1) 20:38	06:18 20:38	07:40 (6) 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22
20	08:39 16:40	07:41 17:44	06:33 18:40	07:16 (1) 20:40	06:16 20:40	07:40 (6) 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20
21	08:38 16:42	07:39 17:46	06:31 18:42	07:16 (1) 20:42	06:13 20:42	07:40 (6) 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18
22	08:36 16:44	07:37 17:48	06:28 18:44	07:16 (1) 20:44	06:11 20:44	07:40 (6) 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15
23	08:35 16:46	07:35 17:50	06:25 18:46	07:16 (1) 20:46	06:09 20:46	07:40 (6) 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13
24	08:33 16:48	07:32 17:52	06:23 18:48	07:16 (1) 20:48	06:06 20:48	07:40 (6) 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11
25	08:32 16:50	07:30 17:54	06:20 18:50	07:16 (1) 20:50	06:04 20:50	07:40 (6) 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:17 18:08
26	08:30 16:52	07:28 17:56	06:18 18:52	07:16 (1) 20:52	06:02 20:52	07:40 (6) 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	08:19 18:06
27	08:29 16:54	07:25 17:58	06:15 18:54	07:16 (1) 20:54	05:59 20:54	07:40 (6) 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:21 18:05
28	08:27 16:56	07:23 18:00	06:13 18:56	07:16 (1) 20:56	05:57 20:56	07:40 (6) 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	08:22 18:02
29	08:26 16:58	07:22 19:58	06:11 19:58	07:16 (1) 20:58	05:55 20:58	07:40 (6) 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	08:24 18:03
30	08:24 17:00	07:20 20:00	06:08 20:00	07:16 (1) 21:00	05:53 21:00	07:40 (6) 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	08:26 16:07
31	08:22 17:02	07:05 20:01	06:05 20:01	07:16 (1) 20:01	05:53 20:01	07:40 (6) 20:01	04:59 21:53	04:59 21:34	05:34 20:25	06:31 20:25	07:28 16:55	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case			128		19					78		70
Sun reduction			0,34		0,39					0,40		0,31
Oper. time red.			1,00		1,00					1,00		1,00
Wind dir. red.			0,98		1,00					1,00		0,97
Total reduction			0,33		0,39					0,39		0,30
Total, real			43		7					31		21

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June						
1	08:53	08:20	07:20	17:11 (5)	07:02	18:49 (2)	05:50	04:58				
	16:10	17:04	18:02	21	17:32 (5)	20:03	29	19:18 (2)	21:01	21:54		
2	08:53	08:19	16:29 (1)	07:18	17:12 (5)	07:00	18:47 (2)	05:48	04:57			
	16:11	17:06	4	16:33 (6)	18:04	20	17:32 (5)	20:05	30	19:17 (2)	21:03	21:56
3	08:52	08:17	16:27 (1)	07:15	17:11 (5)	06:57	18:47 (2)	05:46	04:56			
	16:13	17:08	8	16:35 (6)	18:06	20	17:31 (5)	20:07	31	19:18 (2)	21:05	21:57
4	08:52	08:15	16:27 (1)	07:13	17:12 (5)	06:55	18:46 (2)	05:44	04:55			
	16:14	17:10	10	16:37 (6)	18:08	19	17:31 (5)	20:09	31	19:17 (2)	21:07	21:58
5	08:52	08:13	16:26 (1)	07:11	17:13 (5)	06:52	18:46 (2)	05:42	04:54			
	16:15	17:12	14	16:40 (6)	18:10	16	17:29 (5)	20:11	31	19:17 (2)	21:09	21:59
6	08:51	08:11	16:26 (1)	07:08	17:14 (5)	06:50	18:46 (2)	05:40	04:54			
	16:16	17:14	16	16:42 (6)	18:12	14	17:28 (5)	20:13	30	19:16 (2)	21:11	22:00
7	08:51	08:09	16:26 (1)	07:06	17:16 (5)	06:47	18:46 (2)	05:38	04:53			
	16:18	17:16	19	16:45 (6)	18:14	9	17:25 (5)	20:15	30	19:16 (2)	21:13	22:01
8	08:50	08:07	16:26 (1)	07:03	17:17 (5)	06:45	18:46 (2)	05:36	04:52			
	16:19	17:18	18	16:44 (6)	18:16	20:17	29	19:15 (2)	21:15	22:02		
9	08:49	08:05	16:27 (1)	07:01	17:18 (5)	06:42	18:47 (2)	05:34	04:52			
	16:21	17:20	17	16:44 (6)	18:18	20:19	27	19:14 (2)	21:17	22:03		
10	08:49	08:03	16:26 (1)	06:58	17:19 (5)	06:40	18:47 (2)	05:32	04:51			
	16:22	17:23	15	16:41 (6)	18:20	20:21	25	19:12 (2)	21:18	22:04		
11	08:48	08:01	16:27 (1)	06:56	17:20 (5)	06:37	18:48 (2)	05:30	04:51			
	16:24	17:25	13	16:40 (1)	18:22	20:23	23	19:11 (2)	21:20	22:05		
12	08:47	07:59	16:29 (1)	06:53	17:21 (5)	06:35	18:49 (2)	05:28	04:50			
	16:26	17:27	10	16:39 (1)	18:24	20:25	20	19:09 (2)	21:22	22:06		
13	08:46	07:57	16:31 (1)	06:51	17:22 (5)	06:32	18:51 (2)	05:26	04:50			
	16:27	17:29	7	16:38 (1)	18:26	20:27	16	19:07 (2)	21:24	22:07		
14	08:45	07:55	16:30 (1)	06:48	17:23 (5)	06:30	18:55 (2)	05:24	04:49			
	16:29	17:31	18:28	20:29	9	19:04 (2)	21:26	22:07				
15	08:44	07:52	16:31 (1)	06:46	17:24 (5)	06:28	18:56 (2)	05:22	04:49			
	16:31	17:33	18:30	20:30	21:28	22:08						
16	08:43	07:50	16:32 (1)	06:43	17:25 (5)	06:25	18:57 (2)	05:21	04:49			
	16:32	17:35	18:32	20:32	21:29	22:08						
17	08:42	07:48	16:33 (1)	06:41	17:26 (5)	06:23	18:58 (2)	05:19	04:49			
	16:34	17:37	18:34	20:34	21:31	22:09						
18	08:41	07:46	16:34 (1)	06:38	17:27 (5)	06:20	18:59 (2)	05:17	04:49			
	16:36	17:39	18:36	20:36	21:33	22:09						
19	08:40	07:44	16:35 (1)	06:35	17:28 (5)	06:18	19:00 (2)	05:16	04:49			
	16:38	17:41	18:38	20:38	21:34	22:10						
20	08:39	07:41	16:36 (1)	06:33	17:29 (5)	06:15	19:01 (2)	05:14	04:49			
	16:40	17:43	18:40	20:40	21:36	22:10						
21	08:37	07:39	16:37 (1)	06:30	17:30 (5)	06:13	19:02 (2)	05:12	04:49			
	16:42	17:46	18:42	20:42	21:38	22:10						
22	08:36	07:37	16:38 (1)	06:28	17:31 (5)	06:11	19:03 (2)	05:11	04:49			
	16:44	17:48	18:44	20:44	21:39	22:11						
23	08:35	07:34	17:18 (5)	06:25	17:32 (5)	06:08	19:04 (2)	05:09	04:49			
	16:45	17:50	3	17:21 (5)	18:46	20:46	21:41	22:11				
24	08:33	07:32	17:16 (5)	06:23	17:33 (5)	06:06	19:05 (2)	05:08	04:50			
	16:47	17:52	7	17:23 (5)	18:48	20:48	21:43	22:11				
25	08:32	07:30	17:14 (5)	06:20	17:34 (5)	06:04	19:06 (2)	05:07	04:50			
	16:49	17:54	11	17:25 (5)	18:50	20:50	21:44	22:11				
26	08:30	07:27	17:13 (5)	06:18	17:35 (5)	06:02	19:07 (2)	05:05	04:50			
	16:51	17:56	15	17:28 (5)	18:52	10	18:10 (2)	20:52	21:46	22:11		
27	08:29	07:25	17:12 (5)	06:15	17:36 (5)	05:59	19:08 (2)	05:04	04:51			
	16:53	17:58	17	17:29 (5)	18:54	16	18:12 (2)	20:54	21:47	22:11		
28	08:27	07:23	17:12 (5)	06:13	17:37 (5)	05:57	19:09 (2)	05:03	04:51			
	16:55	18:00	20	17:32 (5)	18:56	20	18:14 (2)	20:56	21:49	22:11		
29	08:25	07:20	17:11 (5)	06:10	17:38 (5)	05:55	19:10 (2)	05:01	04:52			
	16:57	18:02	23	17:35 (5)	18:58	19:15 (2)	20:58	21:50	22:10			
30	08:24	07:18	17:10 (5)	06:07	17:39 (5)	05:53	19:11 (2)	05:00	04:53			
	17:00	18:05	26	17:32 (5)	18:59	26	19:17 (2)	21:00	21:52	22:10		
31	08:22	07:13	17:09 (5)	06:05	17:40 (5)	05:51	19:12 (2)	04:59	21:53	22:10		
	17:02	18:07	28	17:31 (5)	18:56	28	19:17 (2)	21:53	22:10			
Potential sun hours	244	270	366	422	499	517						
Total, worst case		224	242	361								
Sun reduction		0,24	0,34	0,39								
Oper. time red.		1,00	1,00	1,00								
Wind dir. red.		0,85	0,96	1,00								
Total reduction		0,20	0,32	0,39								
Total, real		46	78	140								

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:53	05:35	06:33	18:47 (2)	07:29	07:30	15:56 (1)	08:27
	22:10	21:32	20:23	19:10 (2)	19:06	16:53	15:11 (6)	16:06
2	04:54	05:37	06:34	18:46 (2)	07:30	07:32	15:55 (1)	08:29
	22:09	21:30	20:20	19:11 (2)	19:04	16:51	16:12 (6)	16:05
3	04:55	05:39	06:36	18:44 (2)	07:32	07:34	15:56 (1)	08:30
	22:09	21:28	20:18	19:11 (2)	19:01	16:49	16:14 (6)	16:04
4	04:56	05:41	06:38	18:43 (2)	07:34	07:36	15:56 (1)	08:32
	22:08	21:26	20:15	19:12 (2)	18:59	16:47	16:14 (6)	16:04
5	04:57	05:43	06:40	18:42 (2)	07:36	07:38	15:56 (1)	08:33
	22:08	21:24	20:13	19:12 (2)	18:56	16:45	16:12 (6)	16:03
6	04:58	05:44	06:42	18:42 (2)	07:38	17:55 (5)	15:56 (1)	08:35
	22:07	21:22	20:10	19:12 (2)	18:54	18:00 (5)	16:43	16:02
7	04:59	05:46	06:44	18:42 (2)	07:40	17:52 (5)	15:57 (1)	08:36
	22:06	21:20	20:08	19:12 (2)	18:51	18:03 (5)	16:41	16:02
8	05:00	05:48	06:46	18:40 (2)	07:42	17:49 (5)	15:58 (1)	08:38
	22:06	21:18	20:05	19:11 (2)	18:49	18:04 (5)	16:39	16:01
9	05:01	05:50	06:47	18:40 (2)	07:44	17:47 (5)	16:00 (1)	08:39
	22:05	21:16	20:03	19:11 (2)	18:46	18:04 (5)	16:37	16:01
10	05:02	05:52	06:49	18:40 (2)	07:46	17:47 (5)	16:03 (6)	08:40
	22:04	21:14	20:00	19:10 (2)	18:44	18:06 (5)	16:35	16:01
11	05:03	05:54	06:51	18:41 (2)	07:48	17:46 (5)	16:00 (1)	08:41
	22:03	21:12	19:58	19:10 (2)	18:41	18:06 (5)	16:33	16:00
12	05:04	05:55	06:53	18:41 (2)	07:50	17:46 (5)	15:58 (1)	08:42
	22:02	21:10	19:55	19:09 (2)	18:39	18:06 (5)	16:32	16:00
13	05:06	05:57	06:55	18:41 (2)	07:52	17:45 (5)	16:06 (6)	08:44
	22:01	21:08	19:52	19:07 (2)	18:36	18:06 (5)	16:30	16:00
14	05:07	05:59	06:57	18:42 (2)	07:54	17:45 (5)	15:58 (1)	08:45
	22:00	21:05	19:50	19:06 (2)	18:34	18:04 (5)	16:28	16:00
15	05:08	06:01	06:59	18:43 (2)	07:56	17:45 (5)	16:00 (1)	08:46
	21:59	21:03	19:47	19:04 (2)	18:32	18:01 (5)	16:27	16:00
16	05:10	06:03	07:00	18:45 (2)	07:57	17:46 (5)	15:58 (1)	08:47
	21:57	21:01	19:45	19:02 (2)	18:29	17:59 (5)	16:25	16:00
17	05:11	06:05	07:02	18:47 (2)	07:59	17:46 (5)	16:00 (1)	08:47
	21:56	20:59	19:42	18:59 (2)	18:27	17:56 (5)	16:23	16:00
18	05:13	06:06	07:04	18:41 (2)	08:01	17:48 (5)	15:58 (1)	08:48
	21:55	20:56	19:40	18:24	18:24	17:54 (5)	16:22	16:00
19	05:14	06:08	07:06	18:03	08:03	17:50 (5)	16:00 (1)	08:49
	21:54	20:54	19:37	18:22	18:22	17:51 (5)	16:20	16:01
20	05:16	06:10	07:08	18:05	08:05	17:48 (5)	15:58 (1)	08:50
	21:52	20:52	19:35	18:20	18:20	17:48 (5)	16:19	16:01
21	05:17	06:12	07:10	18:07	08:07	17:48 (5)	16:00 (1)	08:50
	21:51	20:49	19:32	18:17	18:17	17:48 (5)	16:17	16:01
22	05:19	06:14	07:12	18:09	08:09	17:48 (5)	16:00 (1)	08:51
	21:49	20:47	19:29	18:15	18:15	17:48 (5)	16:16	16:02
23	05:20	06:16	07:14	18:11	08:11	17:48 (5)	16:00 (1)	08:51
	21:48	20:45	19:27	18:13	18:13	17:48 (5)	16:15	16:02
24	05:22	06:18	07:15	18:13	08:13	17:48 (5)	16:00 (1)	08:52
	21:46	20:42	19:24	18:10	18:10	17:48 (5)	16:13	16:03
25	05:23	06:20	07:17	18:15	08:17	17:48 (5)	16:00 (1)	08:52
	21:45	20:40	19:22	18:08	18:08	17:48 (5)	16:12	16:03
26	05:25	06:21	07:19	18:17	08:19	17:48 (5)	16:00 (1)	08:52
	21:43	20:37	19:19	18:06	18:06	17:48 (5)	16:11	16:04
27	05:27	06:23	07:21	18:19	08:20	17:48 (5)	16:00 (1)	08:53
	21:41	20:35	19:17	18:04	18:04	17:48 (5)	16:10	16:05
28	05:28	06:25	07:23	18:21	08:21	17:48 (5)	16:00 (1)	08:53
	21:39	20:33	19:14	18:02	18:02	17:48 (5)	16:09	16:06
29	05:30	06:27	18:55 (2)	07:25	07:24	16:00 (1)	15:58 (1)	08:53
	21:38	20:30	19:06 (2)	19:11	16:59	16:08 (1)	16:08	16:07
30	05:32	06:29	18:51 (2)	07:27	07:26	15:58 (1)	16:00 (1)	08:53
	21:36	20:28	19:07 (2)	19:09	16:57	16:09 (1)	16:07	16:08
31	05:34	06:31	18:49 (2)		07:28	15:57 (1)		08:53
	21:34	20:25	19:09 (2)		16:55	16:10 (1)		16:09
Potential sun hours	519	464	383	327	254	227		
Total, worst case		47	443	225	119			
Sun reduction		0,52	0,40	0,31	0,16			
Oper. time red.		1,00	1,00	1,00	1,00			
Wind dir. red.		1,00	1,00	0,91	0,81			
Total reduction		0,51	0,39	0,27	0,12			
Total, real		24	172	62	15			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: I - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, shadow times, and reduction factors. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	08:06 (6) 08:11 (6)	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	08:13 (6) 08:13 (6)	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 08:14 (6)	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 06:52	20:11 21:09	21:09 21:59	22:08 21:25	20:13 21:25	20:13 20:13	18:56 10	08:14 (6) 08:04 (6)	16:45 08:34
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (6) 06:50	20:13 21:11	22:00 22:07	20:10 21:23	20:10 20:10	20:10 20:10	18:54 8	08:06 (6) 08:14 (6)	16:43 08:35
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (6) 06:47	20:15 21:13	22:01 22:06	20:10 21:21	20:08 20:08	20:08 20:08	18:51 5	08:08 (6) 08:13 (6)	16:41 08:36
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (6) 06:45	20:17 21:15	22:02 22:06	20:05 21:18	20:05 20:05	20:05 20:05	18:49 3	08:10 (6) 08:13 (6)	16:39 08:38
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 06:42	20:19 21:17	22:03 22:03	20:03 21:16	20:03 20:03	20:03 20:03	18:46 7	07:44 08:13 (6)	16:37 08:39
10	08:49 16:23	08:03 17:23	06:58 18:20	07:24 (6) 06:40	20:21 21:19	22:04 22:04	20:00 21:14	20:00 20:00	20:00 20:00	18:44 7	07:46 08:13 (6)	16:35 08:40
11	08:48 16:24	08:01 17:25	06:56 18:22	07:25 (6) 06:37	20:21 21:20	22:05 22:05	20:03 21:12	20:03 21:12	20:03 21:12	18:42 7	07:48 08:13 (6)	16:34 08:41
12	08:47 16:26	07:59 17:27	06:53 18:24	07:33 (6) 06:35	20:23 20:25	22:06 22:06	20:05 21:10	20:05 21:10	20:05 21:10	18:39 7	07:50 08:13 (6)	16:32 08:43
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	18:37 7	07:52 08:13 (6)	16:30 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	18:34 7	07:54 08:13 (6)	16:28 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	07:10 (1) 07:12 (1)	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	18:32 7	07:56 08:13 (6)	16:27 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	07:08 (1) 07:13 (1)	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	18:32 7	07:58 08:13 (6)	16:27 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	07:05 (1) 07:12 (1)	06:23 20:35	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	18:29 7	07:02 08:13 (6)	16:25 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	07:02 (1) 07:11 (1)	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	18:27 7	07:04 08:13 (6)	16:24 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	07:04 (1) 07:09 (1)	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	18:25 7	07:06 08:13 (6)	16:22 16:00
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	18:22 7	07:08 08:13 (6)	16:20 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	18:20 7	07:10 08:13 (6)	16:19 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	18:18 7	07:12 08:13 (6)	16:18 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	18:15 7	07:14 08:13 (6)	16:16 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	18:13 7	07:48 (1) 07:52 (1)	16:15 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	18:11 7	07:46 (1) 07:54 (1)	16:14 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	18:09 7	07:46 (1) 07:54 (1)	16:12 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	18:07 7	07:48 (1) 07:54 (1)	16:11 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	18:05 7	07:50 (1) 07:53 (1)	16:10 16:06
29	08:26 16:58	07:10 19:58	06:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	18:02 7	07:24 17:00	16:08 16:07
30	08:24 17:00	07:08 20:00	06:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	18:00 7	07:26 16:57	16:06 16:08
31	08:22 17:02	07:05 20:01	06:05 20:01	04:59 21:53	05:00 21:53	04:59 22:10	05:34 21:34	06:31 20:25	19:09 19:09	18:00 7	07:28 16:55	16:05 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case										29	53	
Sun reduction			0,34							0,40	0,31	
Oper. time red.			1,00							1,00	1,00	
Wind dir. red.			0,98							1,00	0,98	
Total reduction			0,34							0,39	0,30	
Total, real			27							11	16	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	08:01 (6) 08:08 (6)	07:30 16:53	08:27 16:06	
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:59 (6) 08:09 (6)	07:32 16:51	08:29 16:05	
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:37 20:18	07:33 19:01	08:00 (6) 08:10 (6)	07:34 16:49	08:31 16:05	
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 08:10 (6)	07:36 16:47	08:32 16:04	
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (6) 08:10 (6)	07:38 16:45	08:34 16:03	
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:06 (6) 08:09 (6)	07:40 16:43	08:35 16:03	
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (6) 20:15	06:47 21:13	05:38 22:01	04:53 22:06	05:46 21:21	06:44 20:08	07:40 18:51	07:42 08:09 (6)	07:42 16:41	08:36 16:02	
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (6) 20:17	06:45 21:15	05:36 22:02	04:52 22:06	05:00 21:18	06:46 20:05	07:42 18:49	07:44 08:09 (6)	07:44 16:39	08:38 16:02	
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 20:19	06:42 21:17	05:34 22:03	04:52 22:05	05:01 21:16	06:48 20:03	07:44 18:46	07:46 08:09 (6)	07:46 16:37	08:39 16:01	
10	08:49 16:23	08:03 17:23	06:58 18:20	07:23 (6) 20:21	06:40 21:19	05:32 22:04	04:51 22:04	05:02 21:14	06:50 20:00	07:46 18:44	07:48 08:09 (6)	07:48 16:35	08:40 16:01	
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (6) 20:23	06:37 21:20	05:30 22:05	04:51 22:03	05:03 21:12	06:51 19:58	07:48 18:42	07:50 08:09 (6)	07:50 16:34	08:41 16:01	
12	08:47 16:26	07:59 17:27	06:53 18:24	07:21 (6) 20:25	06:35 21:22	05:28 22:06	04:50 22:02	05:05 21:10	06:53 19:55	07:50 18:39	07:52 08:09 (6)	07:52 16:32	08:43 16:00	
13	08:46 16:27	07:57 17:29	06:51 18:26	07:24 (6) 20:27	06:33 21:24	05:26 22:07	04:50 22:01	05:06 21:08	06:55 19:53	07:52 18:37	07:54 08:09 (6)	07:54 16:30	08:44 16:00	
14	08:46 16:29	07:55 17:31	06:48 18:28	07:25 (6) 20:29	06:30 21:26	05:24 22:07	04:50 22:00	05:07 21:06	06:57 19:50	07:54 18:34	07:56 08:09 (6)	07:56 16:28	08:45 16:00	
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:48	07:56 18:32	07:58 08:09 (6)	07:58 16:27	08:46 16:00	
16	08:44 16:33	07:50 17:35	06:43 18:32	07:08 (1) 20:33	06:25 21:29	05:21 22:09	04:49 21:58	05:03 21:01	07:01 19:45	07:58 18:29	07:59 08:09 (6)	07:59 16:25	08:47 16:00	
17	08:42 16:34	07:48 17:37	06:41 18:34	07:05 (1) 20:35	06:23 21:31	05:19 22:09	04:49 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 08:09 (6)	08:02 16:24	08:48 16:00	
18	08:41 16:36	07:46 17:39	06:38 18:36	07:02 (1) 20:36	06:20 21:33	05:17 22:10	04:49 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:04 08:09 (6)	08:04 16:22	08:48 16:00	
19	08:40 16:38	07:44 17:42	06:36 18:38	07:00 (1) 20:38	06:18 21:35	05:16 22:10	04:49 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:06 08:09 (6)	08:06 16:20	08:49 16:01	
20	08:39 16:40	07:42 17:44	06:33 18:40	07:00 (1) 20:40	06:16 21:36	05:14 22:10	04:49 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 08:09 (6)	08:08 16:19	08:50 16:01	
21	08:38 16:42	07:39 17:46	06:31 18:42	07:05 (1) 20:42	06:13 21:38	05:13 22:11	04:49 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 08:09 (6)	08:10 16:18	08:50 16:01	
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	04:49 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 08:09 (6)	08:12 16:16	08:51 16:02	
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:50 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:14 08:09 (6)	08:13 16:15	08:51 16:02	
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:16 08:09 (6)	08:15 16:14	08:52 16:03	
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:16 17:08	08:18 08:09 (6)	08:17 16:12	08:52 16:04	
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	08:19 17:06	08:20 08:09 (6)	08:19 16:11	08:52 16:04	
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:21 17:04	08:22 08:09 (6)	08:21 16:10	08:53 16:05	
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	08:22 17:02	08:24 08:09 (6)	08:22 16:09	08:53 16:06	
29	08:26 16:58	07:10 19:58	07:08 18:54	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	08:24 17:00	08:26 08:09 (6)	08:24 16:08	08:53 16:07	
30	08:24 17:00	07:08 20:00	07:08 18:54	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	08:26 16:57	08:28 08:09 (6)	08:26 16:07	08:53 16:08	
31	08:22 17:02	07:05 20:01	07:05 18:54	04:59 21:53	04:59 21:53	04:59 22:10	05:34 21:34	06:31 20:25	19:09 16:55	07:28 16:55	08:30 08:09 (6)	07:28 16:55	08:53 16:09	
Potential sun hours	244	270	366	422	499	517	519	464	383	25	44	327	254	227
Total, worst case										25	44	327	254	227
Sun reduction			0,34							0,40	0,31			
Oper. time red.			1,00							1,00	1,00			
Wind dir. red.			0,99							1,00	0,98			
Total reduction			0,34							0,39	0,30			
Total, real			23							10	13			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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K. Donelacio str. 55-2
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+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:56 (6) 08:06 (6)	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:58 (6) 08:06 (6)	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:37 20:18	07:33 19:01	08:00 (6) 08:06 (6)	07:34 16:49	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 08:06 (6)	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (6) 08:05 (6)	07:38 16:45	08:34 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:05 (6)	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:04 (6)	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	08:04 (6)	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 06:42	05:34 20:19	04:52 21:17	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	08:04 (6)	07:46 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	07:23 (6) 06:40	05:32 20:21	04:51 21:19	05:02 22:04	05:52 21:14	06:50 20:00	07:46 18:44	08:04 (6)	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (6) 06:37	05:30 20:23	04:51 21:20	05:03 22:05	05:54 21:12	06:51 19:58	07:48 18:42	08:04 (6)	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	07:18 (6) 06:35	05:28 20:25	04:50 21:22	05:05 22:06	05:56 21:10	06:53 19:55	07:50 18:39	08:04 (6)	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	07:17 (6) 06:33	05:26 20:27	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	08:04 (6)	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	07:20 (6) 06:30	05:24 20:29	04:50 21:26	05:07 22:07	05:59 21:06	06:57 19:50	07:54 18:34	08:04 (6)	07:56 16:28	08:45 16:00
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17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:33	05:19 21:29	04:49 22:09	05:11 21:58	06:05 21:01	07:02 19:45	08:00 18:29	08:04 (6)	08:02 16:25	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:31	04:49 22:09	05:13 21:56	06:07 20:59	07:04 19:42	08:02 18:27	08:04 (6)	08:04 16:24	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:04 (6)	08:06 16:20	08:49 16:01
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:04 (6)	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:04 (6)	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:04 (6)	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:50 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:04 (6)	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:04 (6)	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:16 17:08	08:04 (6)	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	08:18 17:06	08:04 (6)	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:20 17:04	08:04 (6)	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	08:22 17:02	08:04 (6)	08:22 16:09	08:53 16:06
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30	08:24 17:00	07:08 20:00	06:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	08:26 16:57	08:04 (6)	08:26 16:07	08:53 16:08
31	08:22 17:02	07:05 20:01	06:05 20:01	05:51 21:53	05:00 21:53	04:59 22:10	05:34 21:34	06:31 20:25	07:28 16:55	08:28 16:55	08:04 (6)	08:28 16:07	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227	
Total, worst case													
Sun reduction			0,36							0,40		0,31	
Oper. time red.			1,00							1,00		1,00	
Wind dir. red.			0,99							0,99		0,99	
Total reduction			0,34							0,39		0,30	
Total, real			12							3		9	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70Shadow receptor: M - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

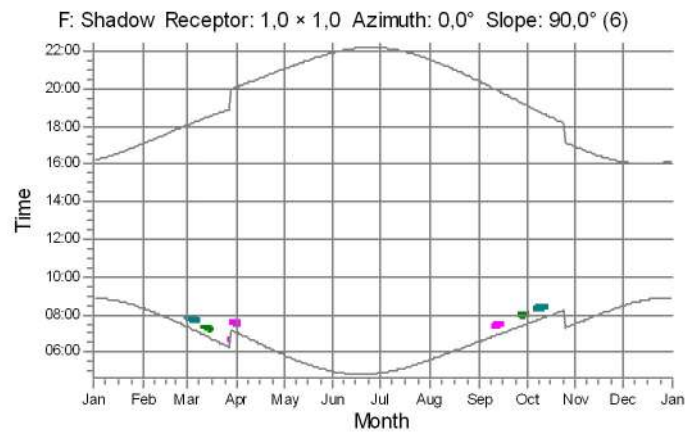
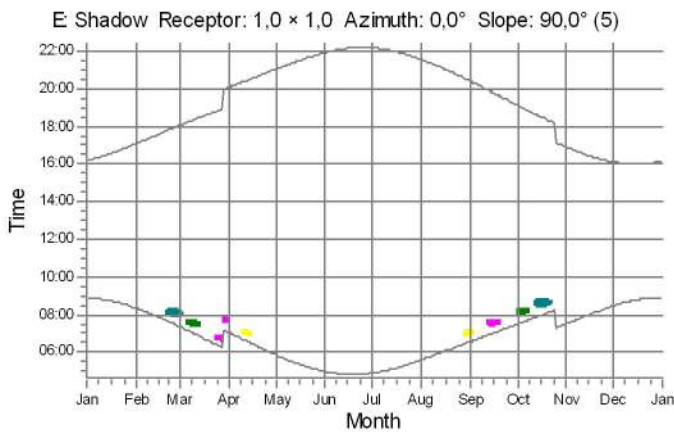
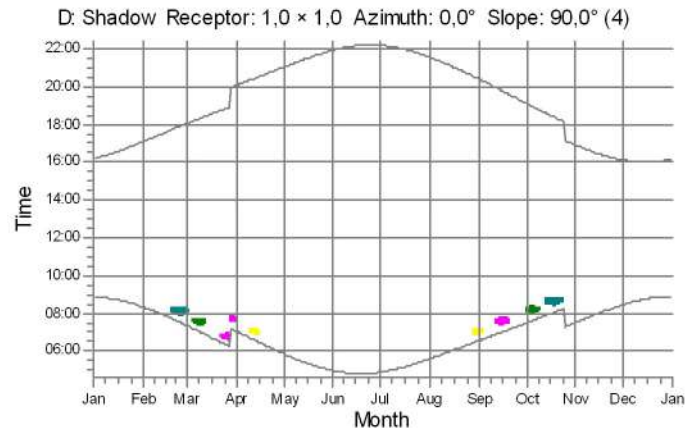
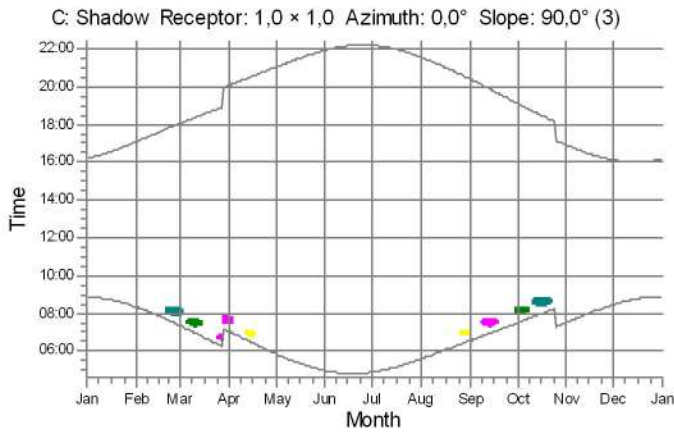
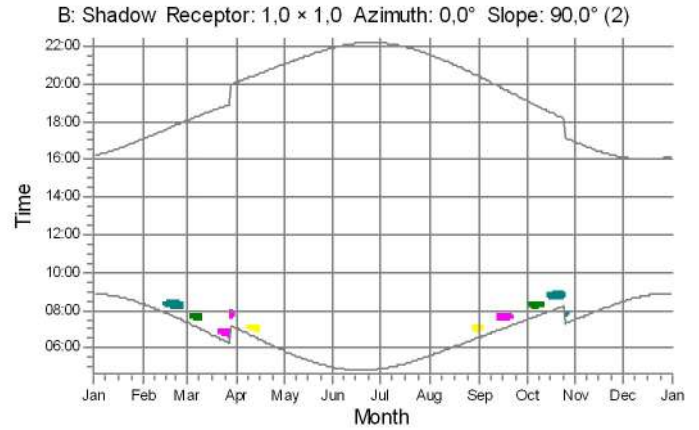
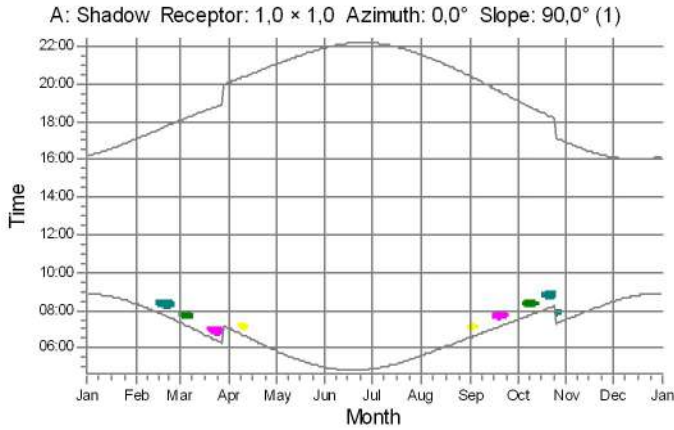
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	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
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	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:24	20:13	18:56	16:45	16:03
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	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:03
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	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E70

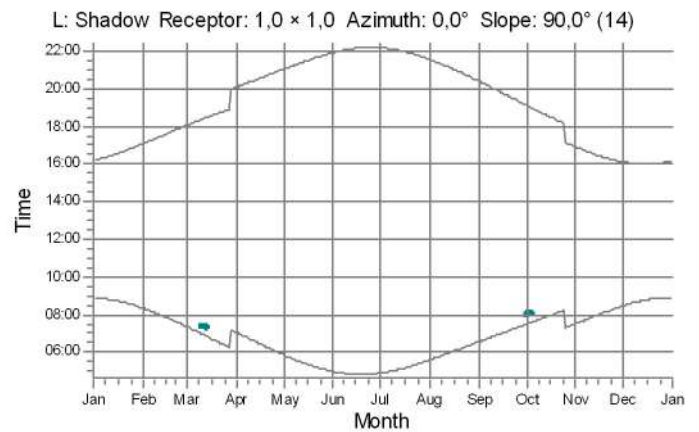
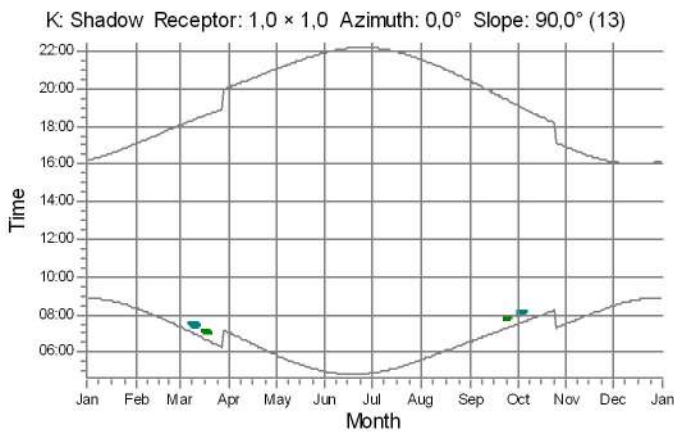
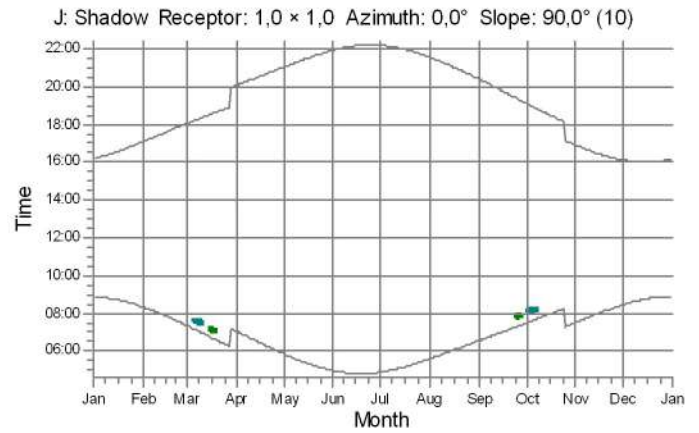
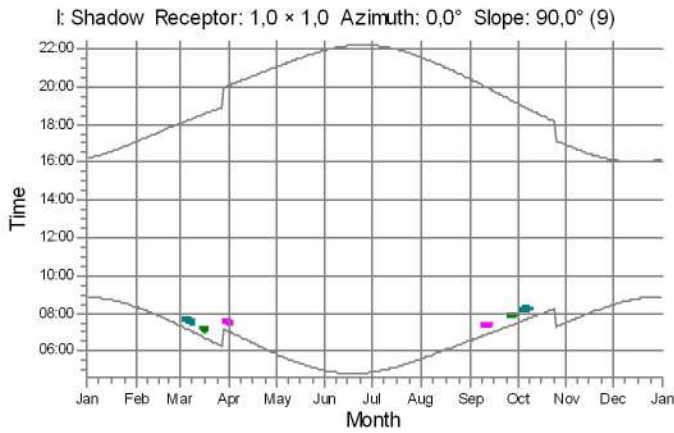
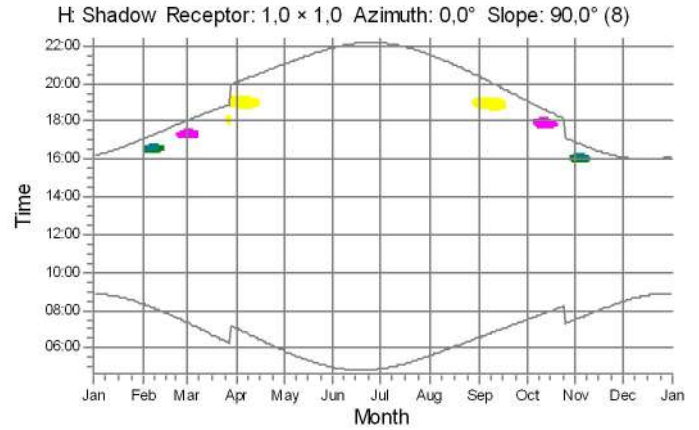
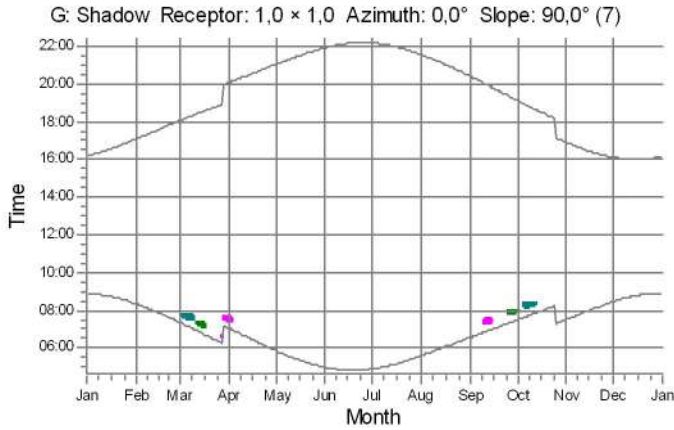


WTGs

- 1: ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)
- 2: ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)
- 5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E70



WTGs

- 1: ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)
- 2: ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)
- 5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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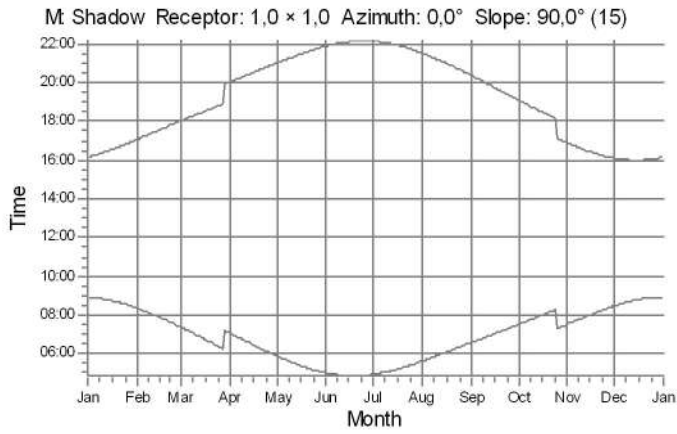
Raminta Survilè / r.survile@infraplanas.lt

Calculated:

2021.06.16 10:54/3.4.415

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E70



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E70WTG: 1 - ENERCON E-70 E4 2000 71.0 !OI hub: 85,0 m (TOT: 120,5 m) (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (e.g., 08:53 | 08:20) and a final row for 'Potential sun hours' and 'Sum of minutes with flicker'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E70WTG: 2 - ENERCON E-70 E4 2000 71.0 IOI hub: 85,0 m (TOT: 120,5 m) (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for individual days, showing sun rise/set times and operational status.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E70WTG: 3 - ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (7)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:22	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E70WTG: 4 - ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (8)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time

0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:30	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:02	16:09	16:06
29	08:25		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E70WTG: 5 - ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a matrix of sun rise/set times and operational status (0/1) for each hour. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 10:54/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E70WTG: 6 - ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and rows for each day of the year (1-31). Columns contain start and end times for shadow events. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

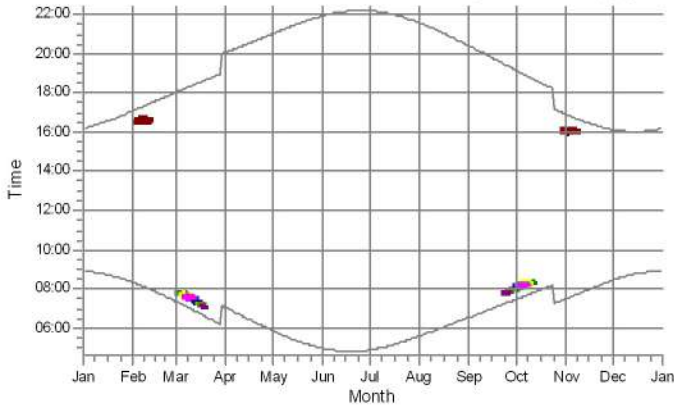
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Calculated:
2021.06.16 10:54/3.4.415

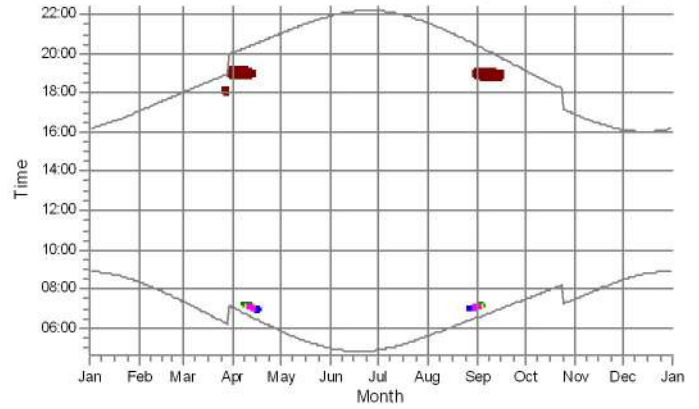
SHADOW - Calendar per WTG, graphical

Calculation: Planuojamos Enercon E70

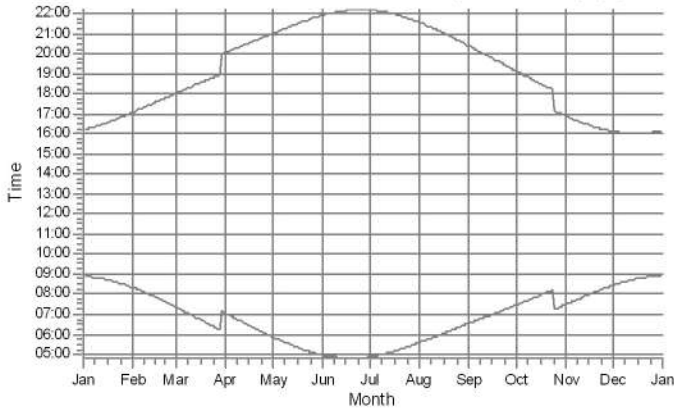
1: ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)



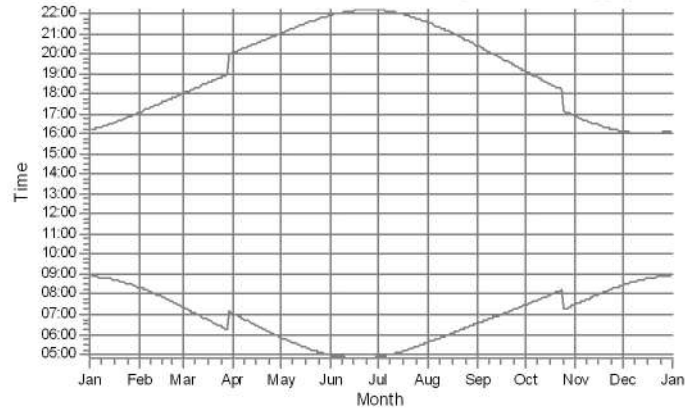
2: ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)



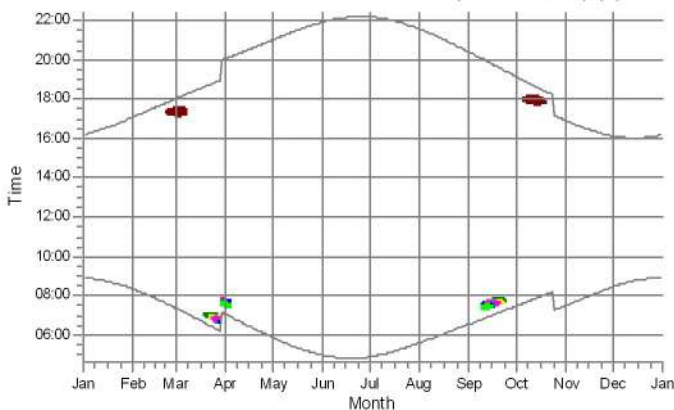
3: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)



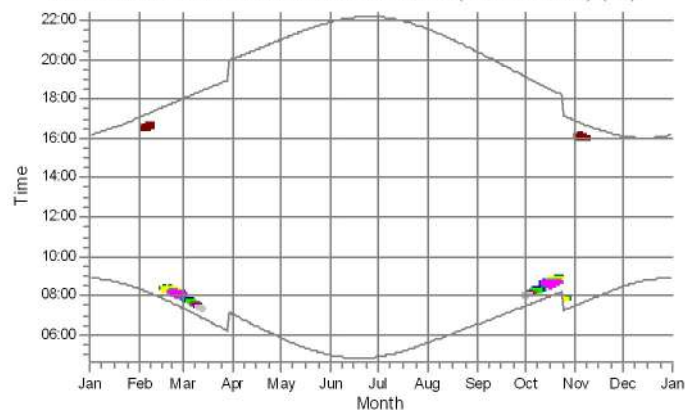
4: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)



5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)



6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)



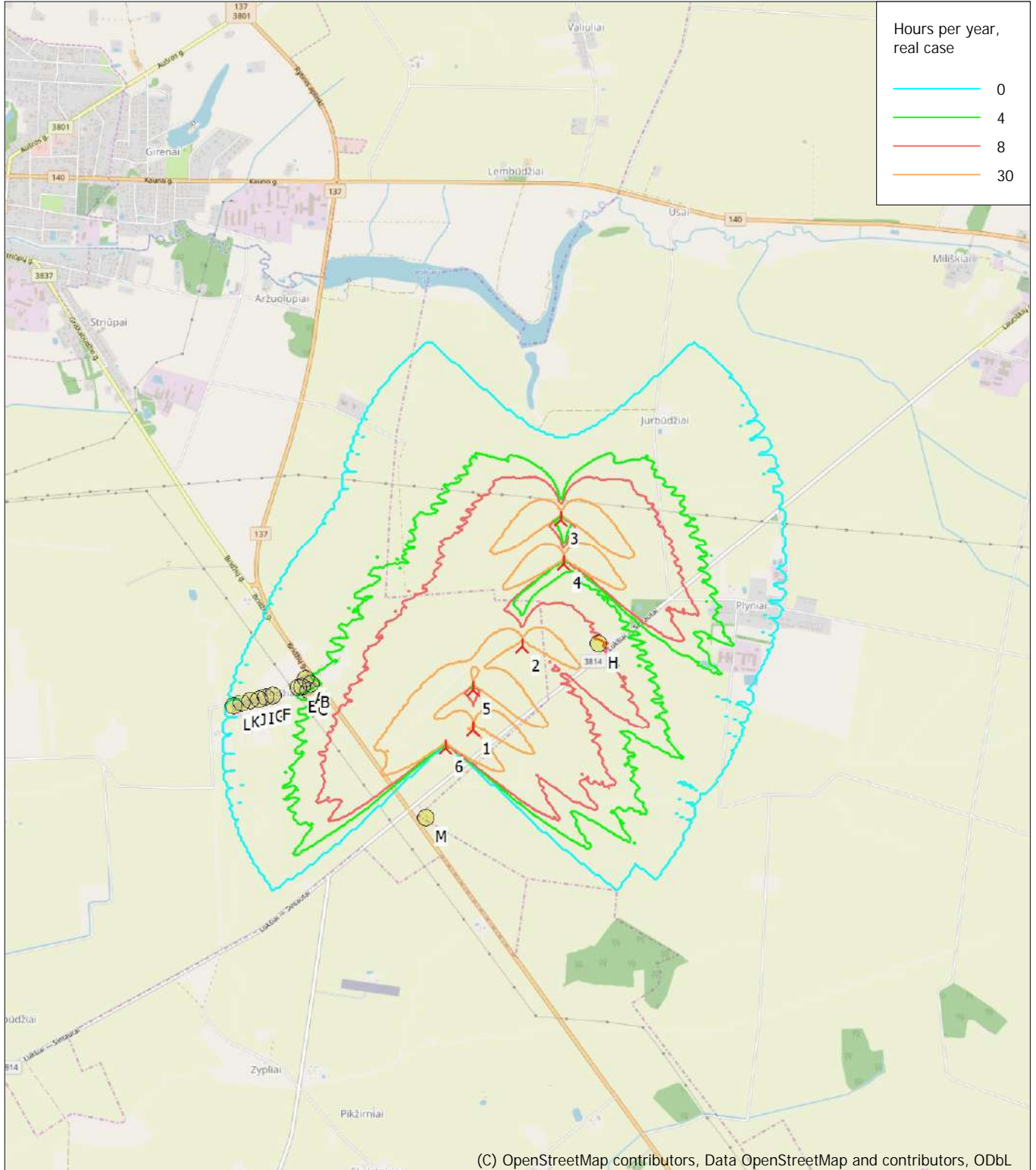
Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)

- G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

SHADOW - Map

Calculation: Planuojamos Enercon E70



Map: EMD OpenStreetMap , Print scale 1:40.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 442.440 North: 6.088.240
 New WTG Shadow receptor
 Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

Project:

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Calculated:
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SHADOW - Main Result

Calculation: Planuojamos Enercon E70 Shut down
Assumptions for shadow calculations

Maximum distance for influence
Calculate only when more than 20 % of sun is covered by the blade
Please look in WTG table

Minimum sun height over horizon for influence 3 °
Day step for calculation 1 days
Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Flicker curtailment according to specified plan

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo
Obstacles used in calculation
Eye height for map: 1,5 m
Grid resolution: 1,0 m

All coordinates are in
Lithuanian TM LKS94-LKS94 (LT)
WTGs



(C) OpenStreetMap-contributors, Data OpenStreetMap and contributors, ODbL

Scale 1:40.000
New WTG Shadow receptor

WTG type	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
							Calculation distance [m]	RPM [RPM]
ENERCON E-70 E4-2.000	No	ENERCON	E-70 E4-2.000	2.000	71,0	85,0	1.643	20,0
ENERCON E-70 E4-2.000	No	ENERCON	E-70 E4-2.000	2.000	71,0	85,0	1.643	20,0
ENERCON E-82-2.000	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
ENERCON E-82-2.000	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
ENERCON E-82-2.000	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
ENERCON E-82-2.000	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5

Shadow receptor-Input

No.	Y	X	Z	Width [m]	Height [m]	Elevation a.g.l. [m]	Slope of window [°]	Direction mode	Eye height (ZVI) a.g.l. [m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Project:

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SHADOW - Main Result

Calculation: Planuojamos Enercon E70 Shut down

Calculation Results

Shadow receptor

Shadow, expected values

No.	Shadow hours per year [h/year]	Avoided hours per year [h/year]
A*	3:18	0:13
B*	3:44	0:14
C*	3:45	0:13
D*	3:15	0:11
E*	3:01	0:10
F	1:56	
G	1:41	
H*	6:35	2:21
I	1:31	
J	0:53	
K	0:46	
L	0:23	
M	0:00	

* Receptors where shadow flicker is reduced by curtailment

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Stopped due to flicker curtailment [h/year]	Expected [h/year]
1	ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)	13:32		3:43
2	ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)	11:40	7:27	4:40
3	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)	0:00		0:00
4	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)	0:00		0:00
5	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)	14:21		4:46
6	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)	18:05		4:43

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

Project:

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Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December				
1	08:53	08:20	07:20	07:46 (1)	07:03	05:51	04:58	04:54	05:36	06:33	07:03 (2)	07:29	07:30	08:27		
	16:10	17:04	18:02	3 07:49 (1)	20:03	21:02	21:54	22:10	21:32	20:23	8 07:11 (2)	19:07	16:53	16:06		
2	08:53	08:19	07:18	07:43 (1)	07:00	05:48	04:57	04:54	05:37	06:35	07:03 (2)	07:31	07:32	08:29		
	16:11	17:06	18:04	7 07:50 (1)	20:05	21:03	21:56	22:09	21:30	20:20	9 07:12 (2)	19:04	16:51	16:05		
3	08:52	08:17	07:16	07:41 (1)	06:57	05:46	04:56	04:55	05:39	06:36	07:05 (2)	07:32	07:34	08:30		
	16:13	17:08	18:06	10 07:51 (1)	20:07	21:05	21:57	22:09	21:29	20:18	7 07:12 (2)	19:01	16:49	16:05		
4	08:52	08:15	07:13	07:38 (1)	06:55	05:44	04:55	04:56	05:41	06:38	07:06 (2)	07:34	07:36	08:32		
	16:14	17:10	18:08	12 07:50 (1)	20:09	21:07	21:58	22:08	21:27	20:15	5 07:11 (2)	18:59	16:47	16:04		
5	08:52	08:13	07:11	07:37 (1)	06:52	05:42	04:55	04:57	05:43	06:40	07:08 (2)	07:36	08:18 (1)	07:38	08:34	
	16:15	17:12	18:10	14 07:51 (1)	20:11	21:09	21:59	22:08	21:25	20:13	3 07:11 (2)	18:56	4 08:22 (1)	16:45	16:03	
6	08:51	08:11	07:08	07:37 (1)	06:50	05:40	04:54	04:58	05:45	06:42	07:38	08:15 (1)	07:40	08:35		
	16:17	17:14	18:12	13 07:50 (1)	20:13	21:11	22:00	22:07	21:23	20:10	18:54	9 08:24 (1)	16:43	16:03		
7	08:51	08:09	07:06	07:37 (1)	06:47	05:38	04:53	04:59	05:46	06:44	07:40	08:14 (1)	07:42	08:36		
	16:18	17:16	18:14	11 07:48 (1)	20:15	21:13	22:01	22:06	21:21	20:08	18:51	11 08:25 (1)	16:41	16:02		
8	08:50	08:07	07:03	07:39 (1)	06:45	05:36	04:52	05:00	05:48	06:46	07:42	08:13 (1)	07:44	08:38		
	16:19	17:18	18:16	7 07:46 (1)	20:17	21:15	22:02	22:06	21:18	20:05	18:49	13 08:26 (1)	16:39	16:02		
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	06:48	07:44	08:12 (1)	07:46	08:39		
	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	20:03	18:46	14 08:26 (1)	16:37	16:01		
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	06:49	07:46	08:14 (1)	07:48	08:40		
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	20:00	18:44	11 08:25 (1)	16:35	16:01		
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	06:51	07:48	08:16 (1)	07:50	08:41		
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	19:58	18:41	9 08:25 (1)	16:34	16:01		
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:55	06:53	06:53	07:50	08:18 (1)	07:52	08:43		
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	19:55	18:39	5 08:23 (1)	16:32	16:00		
13	08:46	07:57	06:51	06:33	05:26	04:50	05:06	05:57	06:55	06:55	07:52	08:20 (1)	07:54	08:44		
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	19:53	18:37	1 08:21 (1)	16:30	16:00		
14	08:46	07:55	08:22 (6)	06:48	06:30	05:24	04:50	05:07	05:59	06:57	07:54	08:25 (1)	07:56	08:45		
	16:29	17:31	3 08:25 (6)	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00			
15	08:45	07:53	08:19 (6)	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	08:26 (1)	07:58	08:46		
	16:31	17:33	7 08:26 (6)	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00			
16	08:44	07:50	08:17 (6)	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:39 (5)	07:58	08:00	08:47		
	16:33	17:35	10 08:27 (6)	18:32	20:33	21:29	22:09	21:58	21:01	19:45	8 07:47 (5)	18:29	16:25	16:00		
17	08:42	07:48	08:15 (6)	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:37 (5)	08:00	08:48 (6)	08:02	08:47	
	16:34	17:37	13 08:28 (6)	18:34	20:34	21:31	22:09	21:56	20:59	19:42	12 07:49 (5)	18:27	3 08:51 (6)	16:23	16:00	
18	08:41	07:46	08:12 (6)	06:38	06:20	05:17	04:49	05:13	06:07	07:04	07:36 (5)	08:02	08:44 (6)	08:04	08:48	
	16:36	17:39	15 08:27 (6)	18:36	20:36	21:33	22:10	21:55	20:57	19:40	14 07:50 (5)	18:25	10 08:54 (6)	16:22	16:00	
19	08:40	07:44	08:10 (6)	06:36	06:18	05:16	04:49	05:14	06:08	07:06	07:34 (5)	08:04	08:42 (6)	08:06	08:49	
	16:38	17:42	17 08:27 (6)	18:38	2 07:02 (5)	20:38	21:35	22:10	21:54	20:54	19:37	15 07:49 (5)	18:22	14 08:56 (6)	16:20	16:01
20	08:39	07:41	08:10 (6)	06:33	06:57 (5)	06:16	05:14	04:49	05:16	06:10	07:08	07:35 (5)	08:06	08:41 (6)	08:08	08:50
	16:40	17:44	18 08:28 (6)	18:40	6 07:03 (5)	20:40	21:36	22:10	21:52	20:52	19:35	14 07:49 (5)	18:20	16 08:57 (6)	16:19	16:01
21	08:38	07:39	08:10 (6)	06:31	06:55 (5)	06:13	05:13	04:49	05:17	06:12	07:10	07:37 (5)	08:08	08:40 (6)	08:10	08:50
	16:42	17:46	16 08:26 (6)	18:42	9 07:04 (5)	20:42	21:38	22:11	21:51	20:50	19:32	12 07:49 (5)	18:18	17 08:57 (6)	16:18	16:01
22	08:36	07:37	08:11 (6)	06:28	06:52 (5)	06:11	05:11	04:49	05:19	06:14	07:12	07:39 (5)	08:10	08:40 (6)	08:12	08:51
	16:44	17:48	15 08:26 (6)	18:44	11 07:03 (5)	20:44	21:40	22:11	21:49	20:47	19:30	9 07:48 (5)	18:15	18 08:58 (6)	16:16	16:02
23	08:35	07:35	08:12 (6)	06:25	06:50 (5)	06:09	05:10	04:49	05:20	06:16	07:14	07:41 (5)	08:12	08:41 (6)	08:13	08:51
	16:46	17:50	12 08:24 (6)	18:46	14 07:04 (5)	20:46	21:41	22:11	21:48	20:45	19:27	7 07:48 (5)	18:13	17 08:58 (6)	16:15	16:02
24	08:33	07:32	08:14 (6)	06:23	06:47 (5)	06:06	05:08	04:50	05:22	06:18	07:16	07:43 (5)	08:14	08:43 (6)	08:15	08:52
	16:48	17:52	8 08:22 (6)	18:48	16 07:03 (5)	20:48	21:43	22:11	21:46	20:42	19:24	3 07:46 (5)	18:11	14 08:57 (6)	16:14	16:03
25	08:32	07:30	06:20	06:47 (5)	06:04	05:07	04:50	05:24	06:20	07:17	07:17	07:16	07:45 (6)	08:17	08:52	
	16:50	17:54	18:50	14 07:01 (5)	20:50	21:44	22:11	21:45	20:40	19:22	12 07:49 (5)	18:18	12 07:57 (6)	16:12	16:04	
26	08:30	07:28	06:18	06:48 (5)	06:02	05:05	04:51	05:25	06:22	07:19	07:19	07:18	07:47 (6)	08:19	08:52	
	16:52	17:56	18:52	13 07:01 (5)	20:52	21:46	22:11	21:43	20:38	19:19	11 07:49 (5)	18:17	9 07:56 (6)	16:11	16:04	
27	08:29	07:25	06:15	06:49 (5)	05:59	05:04	04:51	05:27	06:23	07:21	07:21	07:20	07:49 (6)	08:21	08:53	
	16:54	17:58	18:54	9 06:58 (5)	20:54	21:47	22:11	21:41	20:35	19:17	10 07:49 (5)	18:17	6 07:55 (6)	16:10	16:05	
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	07:23	07:22	07:22	07:52 (6)	08:22	08:53	
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:57	2 07:54 (6)	16:09	16:06			
29	08:26	07:10	06:02	05:55	05:02	04:52	05:30	06:27	07:25	07:25	07:24	08:24	08:53			
	16:58	19:58	20:58	21:50	22:10	21:38	20:30	19:12	17:57	17:00	16:08	16:07				
30	08:24	07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	07:27	07:26	08:26	08:53			
	17:00	20:00	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:57	16:07	16:08				
31	08:22	07:05	06:05	04:59	05:34	06:31	07:06 (2)	07:28	08:53							
	17:02	20:01	21:01	21:53	21:34	20:25	3 07:09 (2)	16:55	16:09							
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227				
Total, worst case		134	171					3	126	215						
Sun reduction		0,24	0,34					0,52	0,40	0,31						
Oper. time red.		1,00	1,00					1,00	1,00	1,00						
Wind dir. red.		0,91	0,98					0,98	1,00	0,93						
Total reduction		0,22	0,33					0,51	0,39	0,28						
Total, real		30	57					2	49	61						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: B - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, shadow times, and reduction factors.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)



SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June		
1	08:53	08:20	07:20	07:59 (6)	07:03	07:33 (5)	05:51	04:58
	16:10	17:04	18:02	13 08:12 (6)	20:03	13 07:46 (5)	21:02	21:54
2	08:53	08:19	07:18	08:00 (6)	07:00	07:33 (5)	05:48	04:57
	16:11	17:06	18:04	9 08:09 (6)	20:05	11 07:44 (5)	21:03	21:56
3	08:52	08:17	07:16	06:57	06:57	07:36 (5)	05:46	04:56
	16:13	17:08	18:06	20:07	5 07:41 (5)	21:05	21:57	21:57
4	08:52	08:15	07:13	06:55	06:55	05:44	05:44	04:55
	16:14	17:10	18:08	20:09	21:07	21:58	21:58	21:58
5	08:52	08:13	07:11	06:52	06:52	05:42	04:55	04:55
	16:15	17:12	18:10	20:11	21:09	21:59	21:59	21:59
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40	04:54	04:54
	16:17	17:14	18:12	2 07:35 (1)	20:13	21:11	22:00	22:00
7	08:51	08:09	07:06	07:30 (1)	06:47	05:38	04:53	04:53
	16:18	17:16	18:14	6 07:36 (1)	20:15	21:13	22:01	22:01
8	08:50	08:07	07:03	07:28 (1)	06:45	05:36	04:52	04:52
	16:19	17:18	18:16	9 07:37 (1)	20:17	21:15	22:02	22:02
9	08:50	08:05	07:01	07:25 (1)	06:42	05:34	04:52	04:52
	16:21	17:21	18:18	12 07:37 (1)	20:19	21:17	22:03	22:03
10	08:49	08:03	06:58	07:24 (1)	06:40	05:32	04:51	04:51
	16:22	17:23	18:20	14 07:38 (1)	20:21	21:19	22:04	22:04
11	08:48	08:01	06:56	07:23 (1)	06:37	05:30	04:51	04:51
	16:24	17:25	18:22	14 07:37 (1)	20:23	21:20	22:05	22:05
12	08:47	07:59	06:53	07:24 (1)	06:35	05:28	04:50	04:50
	16:26	17:27	18:24	12 07:36 (1)	20:25	21:22	22:06	22:06
13	08:46	07:57	06:51	07:25 (1)	06:33	05:26	04:50	04:50
	16:27	17:29	18:26	9 07:34 (1)	20:27	21:24	22:07	22:07
14	08:46	07:55	06:48	07:28 (1)	06:30	05:24	04:50	04:50
	16:29	17:31	18:28	4 07:32 (1)	20:29	21:26	22:07	22:07
15	08:45	07:53	06:46	06:28	06:28	05:23	04:49	04:49
	16:31	17:33	18:30	20:31	21:28	22:08	22:08	22:08
16	08:44	07:50	06:43	06:25	06:25	05:21	04:49	04:49
	16:33	17:35	18:32	20:33	21:29	22:09	22:09	22:09
17	08:42	07:48	06:41	06:23	06:23	05:19	04:49	04:49
	16:34	17:37	18:34	20:34	21:31	22:09	22:09	22:09
18	08:41	07:46	06:38	06:20	06:20	05:17	04:49	04:49
	16:36	17:39	18:36	20:36	21:33	22:10	22:10	22:10
19	08:40	07:44	06:36	06:18	06:18	05:16	04:49	04:49
	16:38	17:42	18:38	20:38	21:35	22:10	22:10	22:10
20	08:39	07:41	08:08 (6)	06:33	06:16	05:14	04:49	04:49
	16:40	17:44	5 08:13 (6)	18:40	20:40	21:36	22:10	22:10
21	08:38	07:39	08:05 (6)	06:31	06:13	05:13	04:49	04:49
	16:42	17:46	8 08:13 (6)	18:42	20:42	21:38	22:11	22:11
22	08:36	07:37	08:03 (6)	06:28	06:11	05:11	04:49	04:49
	16:44	17:48	11 08:14 (6)	18:44	20:44	21:40	22:11	22:11
23	08:35	07:35	08:00 (6)	06:25	06:09	05:10	04:49	04:49
	16:46	17:50	14 08:14 (6)	18:46	20:46	21:41	22:11	22:11
24	08:33	07:32	07:58 (6)	06:23	06:06	05:08	04:50	04:50
	16:48	17:52	17 08:15 (6)	18:48	20:48	21:43	22:11	22:11
25	08:32	07:30	07:56 (6)	06:20	06:44 (5)	06:04	05:07	04:50
	16:50	17:54	18 08:14 (6)	18:50	2 06:46 (5)	20:50	21:44	22:11
26	08:30	07:28	07:56 (6)	06:18	06:42 (5)	06:02	05:05	04:51
	16:52	17:56	18 08:14 (6)	18:52	6 06:48 (5)	20:52	21:46	22:11
27	08:29	07:25	07:57 (6)	06:15	06:39 (5)	05:59	05:04	04:51
	16:54	17:58	17 08:14 (6)	18:54	9 06:48 (5)	20:54	21:47	22:11
28	08:27	07:23	07:57 (6)	06:13	06:37 (5)	05:57	05:03	04:52
	16:56	18:00	16 08:13 (6)	18:56	12 06:49 (5)	20:56	21:49	22:11
29	08:26		07:10	07:34 (5)	05:55	05:02	04:52	04:52
	16:58		19:58	14 07:48 (5)	20:58	21:50	22:10	22:10
30	08:24		07:08	07:32 (5)	05:53	05:00	04:53	04:53
	17:00		20:00	16 07:48 (5)	21:00	21:52	22:10	22:10
31	08:22		07:05	07:32 (5)		04:59		
	17:02		20:01	15 07:47 (5)		21:53		
Potential sun hours	244	270	366	422	499	517		
Total, worst case		124	178	29				
Sun reduction		0,24	0,34	0,39				
Oper. time red.		1,00	1,00	1,00				
Wind dir. red.		0,93	0,98	1,00				
Total reduction		0,23	0,33	0,39				
Total, real		28	59	11				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:36	06:33	07:29	08:04 (1)	07:30	08:27	
	22:10	21:32	20:23	19:07	11 08:15 (1)	16:53	16:06	
2	04:54	05:37	06:35	07:31	08:02 (1)	07:32	08:29	
	22:09	21:30	20:20	19:04	13 08:15 (1)	16:51	16:05	
3	04:55	05:39	06:36	07:32	08:02 (1)	07:34	08:30	
	22:09	21:29	20:18	19:01	14 08:16 (1)	16:49	16:05	
4	04:56	05:41	06:38	07:34	08:02 (1)	07:36	08:32	
	22:08	21:27	20:15	18:59	13 08:15 (1)	16:47	16:04	
5	04:57	05:43	06:40	07:36	08:04 (1)	07:38	08:33	
	22:08	21:25	20:13	18:56	11 08:15 (1)	16:45	16:03	
6	04:58	05:45	06:42	07:38	08:06 (1)	07:40	08:35	
	22:07	21:23	20:10	18:54	8 08:14 (1)	16:43	16:03	
7	04:59	05:46	06:44	07:40	08:08 (1)	07:42	08:36	
	22:06	21:21	20:08	18:51	4 08:12 (1)	16:41	16:02	
8	05:00	05:48	06:46	07:42		07:44	08:38	
	22:06	21:18	20:05	18:49		16:39	16:02	
9	05:01	05:50	06:48	07:30 (5)	07:44	07:46	08:39	
	22:05	21:16	20:03	4 07:34 (5)	18:46	16:37	16:01	
10	05:02	05:52	06:49	07:27 (5)	07:46	07:48	08:40	
	22:04	21:14	20:00	10 07:37 (5)	18:44	16:35	16:01	
11	05:03	05:54	06:51	07:25 (5)	07:48	08:36 (6)	07:50	08:41
	22:03	21:12	19:58	13 07:38 (5)	18:41	5 08:41 (6)	16:34	16:01
12	05:05	05:55	06:53	07:24 (5)	07:50	08:33 (6)	07:52	08:43
	22:02	21:10	19:55	15 07:39 (5)	18:39	11 08:44 (6)	16:32	16:00
13	05:06	05:57	06:55	07:23 (5)	07:52	08:31 (6)	07:54	08:44
	22:01	21:08	19:53	16 07:39 (5)	18:37	14 08:45 (6)	16:30	16:00
14	05:07	05:59	06:57	07:24 (5)	07:54	08:30 (6)	07:56	08:45
	22:00	21:06	19:50	14 07:38 (5)	18:34	16 08:46 (6)	16:28	16:00
15	05:09	06:01	06:59	07:26 (5)	07:56	08:29 (6)	07:58	08:46
	21:59	21:03	19:47	12 07:38 (5)	18:32	17 08:46 (6)	16:27	16:00
16	05:10	06:03	07:01	07:28 (5)	07:58	08:28 (6)	08:00	08:47
	21:58	21:01	19:45	9 07:37 (5)	18:29	19 08:47 (6)	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:28 (6)	08:02	08:47
	21:56	20:59	19:42	6 07:36 (5)	18:27	18 08:46 (6)	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:30 (6)	08:04	08:48
	21:55	20:57	19:40	3 07:35 (5)	18:25	16 08:46 (6)	16:22	16:00
19	05:14	06:08	07:06		08:04	08:32 (6)	08:06	08:49
	21:54	20:54	19:37		18:22	13 08:45 (6)	16:20	16:01
20	05:16	06:10	07:08		08:06	08:34 (6)	08:08	08:50
	21:52	20:52	19:35		18:20	10 08:44 (6)	16:19	16:01
21	05:17	06:12	07:10		08:08	08:36 (6)	08:10	08:50
	21:51	20:50	19:32		18:18	7 08:43 (6)	16:18	16:01
22	05:19	06:14	07:12		08:10	08:39 (6)	08:12	08:51
	21:49	20:47	19:30		18:15	3 08:42 (6)	16:16	16:02
23	05:20	06:16	07:14		08:12		08:13	08:51
	21:48	20:45	19:27		18:13		16:15	16:02
24	05:22	06:18	07:16		08:14		08:15	08:52
	21:46	20:42	19:24		18:11		16:14	16:03
25	05:24	06:20	07:17		07:16		08:17	08:52
	21:45	20:40	19:22		17:08		16:12	16:04
26	05:25	06:22	06:55 (2)	07:19	07:18		08:19	08:52
	21:43	20:38	5 07:00 (2)	19:19	17:06		16:11	16:04
27	05:27	06:23	06:54 (2)	07:21	07:20		08:21	08:53
	21:41	20:35	8 07:02 (2)	19:17	17:04		16:10	16:05
28	05:29	06:25	06:54 (2)	07:23	07:22		08:22	08:53
	21:40	20:33	9 07:03 (2)	19:14	17:02		16:09	16:06
29	05:30	06:27	06:56 (2)	07:25	07:24		08:24	08:53
	21:38	20:30	7 07:03 (2)	19:12	17:00		16:08	16:07
30	05:32	06:29	06:58 (2)	07:27	08:05 (1)	07:26	08:26	08:53
	21:36	20:28	5 07:03 (2)	19:09	8 08:13 (1)	16:57	16:07	16:08
31	05:34	06:31	06:59 (2)		07:28		08:53	08:53
	21:34	20:25	3 07:02 (2)		16:55		16:09	16:09
Potential sun hours	519	464	383		327	254	227	
Total, worst case			37		110		223	
Sun reduction			0,52		0,40		0,31	
Oper. time red.			1,00		1,00		1,00	
Wind dir. red.			0,97		1,00		0,95	
Total reduction			0,50		0,39		0,29	
Total, real			19		43		65	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	08:06 (6) 20:03	07:03 21:02	05:51 21:54	04:58 22:10	04:54 21:32	05:36 20:23	07:01 (2) 07:06 (2)	07:29 19:07	07:30 16:53
2	08:53 16:11	08:19 17:06	07:18 18:04	08:08 (6) 20:05	07:00 21:03	05:48 21:56	04:57 22:09	04:54 21:30	05:37 20:20	07:03 (2) 07:06 (2)	07:31 19:04	08:08 (1) 16:51
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	04:55 21:29	05:39 20:18	07:32 19:01	07:32 16:49	08:06 (1) 16:49
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:34 16:47	08:05 (1) 16:47
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 20:11	06:52 21:09	05:42 21:59	04:55 22:08	04:57 21:25	05:43 20:13	07:36 18:56	07:36 16:45	08:04 (1) 16:45
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 20:13	06:50 21:11	05:40 22:00	04:54 22:07	04:58 21:23	05:45 20:10	07:38 18:54	07:38 16:43	08:06 (1) 16:43
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 20:15	06:47 21:13	05:38 22:01	04:53 22:06	04:59 21:21	05:46 20:08	07:40 18:51	07:40 16:41	08:08 (1) 16:41
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 20:17	06:45 21:15	05:36 22:02	04:52 22:06	05:00 21:18	05:48 20:05	07:42 18:49	07:42 16:39	08:10 (1) 16:39
9	08:50 16:21	08:05 17:21	07:01 18:18	07:27 (1) 20:19	06:42 21:17	05:34 22:03	04:52 22:05	05:01 21:16	05:50 20:03	07:44 18:46	07:44 16:37	08:12 (1) 16:37
10	08:49 16:22	08:03 17:23	06:58 18:20	07:28 (1) 20:21	06:40 21:19	05:32 22:04	04:51 22:04	05:02 21:14	05:52 20:00	07:46 18:44	07:46 16:35	08:12 (1) 16:35
11	08:48 16:24	08:01 17:25	06:56 18:22	07:28 (1) 20:23	06:37 21:20	05:30 22:05	04:51 22:03	05:03 21:12	05:54 19:58	07:48 18:41	07:48 16:34	08:11 (1) 16:34
12	08:47 16:26	07:59 17:27	06:53 18:24	07:31 (1) 20:25	06:35 21:22	05:28 22:06	04:50 22:02	05:05 21:10	05:55 19:55	07:33 (5) 07:39 (5)	07:50 18:39	07:52 16:32
13	08:46 16:27	07:57 17:29	06:51 18:26	07:36 (1) 20:27	06:33 21:24	05:26 22:07	04:50 22:01	05:06 21:08	05:57 19:53	07:30 (5) 07:41 (5)	07:52 18:37	07:54 16:30
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	05:59 19:50	07:28 (5) 07:41 (5)	07:54 18:34	07:56 16:28
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:01 19:47	07:27 (5) 07:42 (5)	07:56 18:32	08:33 (6) 16:27
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	06:03 19:45	07:28 (5) 07:42 (5)	07:58 18:29	08:31 (6) 16:25
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	06:05 19:42	07:30 (5) 07:42 (5)	08:00 18:27	08:31 (6) 16:23
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	06:07 19:40	07:32 (5) 07:42 (5)	08:02 18:25	08:30 (6) 16:22
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:08 20:54	06:06 19:37	07:33 (5) 07:40 (5)	08:04 18:22	08:32 (6) 16:20
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	06:10 19:35	07:35 (5) 07:39 (5)	08:06 18:20	08:34 (6) 16:19
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	06:12 19:32	08:08 18:18	08:08 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	06:14 19:30	08:10 18:15	08:10 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:00 (6) 20:46	06:09 21:41	05:10 22:11	04:49 21:48	06:16 20:45	06:16 19:27	08:12 18:13	08:12 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:47 (5) 20:48	06:06 21:43	05:08 22:11	04:50 21:46	06:18 20:42	06:18 19:24	08:14 18:11	08:14 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:44 (5) 20:50	06:04 21:44	05:07 22:11	04:50 21:45	06:20 20:40	06:20 19:17	08:14 18:08	08:14 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:42 (5) 20:52	06:02 21:46	05:05 22:11	04:51 21:43	06:22 20:38	06:22 19:19	08:12 18:04	08:12 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	06:39 (5) 20:54	05:59 21:47	05:04 22:11	04:51 21:41	06:23 20:35	06:23 19:17	08:23 18:04	08:23 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	06:38 (5) 20:56	05:57 21:49	05:03 22:11	04:52 21:40	06:25 20:33	06:25 19:14	08:25 18:04	08:25 16:09	08:53 16:06
29	08:26 16:58	07:26 18:08	06:10 19:58	07:37 (5) 20:58	05:55 21:50	05:02 22:10	04:52 21:38	06:27 20:30	06:27 19:12	06:59 (2) 07:06 (2)	07:25 17:00	08:24 16:07
30	08:24 17:00	07:24 18:14	06:08 20:00	07:39 (5) 21:00	05:53 21:52	05:00 22:10	04:53 21:36	06:29 20:28	06:29 19:09	06:58 (2) 07:07 (2)	07:27 16:57	08:26 16:08
31	08:22 17:02	07:22 18:02	06:05 20:01	07:40 (5) 21:01	05:52 21:53	05:04 22:10	04:59 21:34	06:31 20:25	06:31 19:09	06:59 (2) 07:06 (2)	07:28 16:55	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case		125	167					23	100	207		
Sun reduction		0,24	0,34					0,52	0,40	0,31		
Oper. time red.		1,00	1,00					1,00	1,00	1,00		
Wind dir. red.		0,93	0,99					0,98	1,00	0,95		
Total reduction		0,23	0,34					0,50	0,39	0,29		
Total, real		28	56					12	39	60		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: E - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, shadow times, and reduction factors. Includes a summary row at the bottom for 'Potential sun hours' and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6) Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	07:29 (5) 21:02	05:51 21:54	04:58 22:10	04:54 21:32	05:36 20:23	06:33 19:07	07:29 19:07	07:56 (1) 16:53	07:30 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	07:29 (5) 21:03	05:48 21:56	04:57 22:09	04:54 21:30	05:37 20:20	06:35 19:04	07:31 19:04	07:58 (1) 16:51	07:32 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:36 (6) 21:05	05:46 21:57	04:56 22:09	04:55 21:29	05:39 20:18	06:36 19:01	07:33 19:01	08:01 (1) 16:51	07:34 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	07:38 (6) 21:07	05:44 21:58	04:55 22:08	04:56 21:27	05:41 20:15	06:38 18:59	07:34 18:59	07:58 (1) 16:47	07:36 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	07:36 (6) 21:09	05:42 21:59	04:55 22:08	04:57 21:25	05:43 20:13	06:40 18:56	07:36 18:56	08:15 (6) 16:45	07:38 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	07:37 (6) 21:11	05:40 22:00	04:54 22:07	04:55 21:23	05:45 20:10	06:42 18:54	07:38 18:54	08:15 (6) 16:43	07:40 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	07:38 (6) 21:13	05:38 22:01	04:53 22:06	04:59 21:21	05:46 20:08	06:44 18:51	07:40 18:51	08:13 (6) 16:41	07:42 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	07:41 (6) 21:15	05:36 22:02	04:52 22:06	05:00 21:18	05:48 20:05	06:46 18:49	07:42 18:49	08:12 (6) 16:39	07:44 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	07:44 (6) 21:17	05:34 22:03	04:52 22:05	05:01 21:16	05:50 20:03	06:48 18:46	07:44 18:46	08:12 (6) 16:37	07:44 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	07:44 (6) 21:19	05:32 22:04	04:51 22:04	05:02 21:14	05:52 20:00	06:49 18:44	07:46 18:44	08:14 (6) 16:35	07:48 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:20 (1) 21:20	05:30 22:05	04:51 22:03	05:03 21:12	05:54 19:58	06:51 18:42	07:21 (5) 18:42	08:16 (6) 16:34	07:50 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:18 (1) 21:22	05:28 22:06	04:50 22:02	05:05 21:10	05:56 19:55	06:53 18:39	07:21 (5) 18:39	08:25 (6) 16:32	07:50 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	07:15 (1) 21:24	05:26 22:07	04:50 22:01	05:06 21:08	05:57 19:53	06:55 18:37	07:23 (5) 18:37	08:25 (6) 16:30	07:52 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	07:13 (1) 21:26	05:24 22:07	04:50 22:00	05:07 21:06	05:59 19:50	06:57 18:34	07:24 (5) 18:34	08:24 (6) 16:30	07:54 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	07:11 (1) 21:28	05:23 22:08	04:49 21:59	06:01 21:03	06:59 19:47	07:26 (5) 18:32	07:26 (5) 18:32	08:24 (6) 16:30	07:56 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	07:12 (1) 21:29	05:21 22:09	04:49 21:58	06:03 21:01	07:01 19:45	07:28 (5) 18:29	07:28 (5) 18:29	08:20 (6) 16:25	07:58 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	07:14 (1) 21:31	05:19 22:09	04:49 21:56	06:05 20:59	07:02 19:42	08:00 18:27	07:30 (5) 18:27	08:20 (6) 16:23	08:00 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	07:17 (1) 21:33	05:17 22:10	04:49 21:55	06:07 20:57	07:04 19:40	08:02 18:25	07:31 (5) 18:25	08:24 (6) 16:22	08:04 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	07:18 (1) 21:35	05:16 22:10	04:49 21:54	06:14 20:54	07:06 19:37	08:04 18:22	07:32 (5) 18:22	08:25 (6) 16:20	08:06 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	07:20 (1) 21:36	05:14 22:10	04:49 21:52	06:10 20:52	07:08 19:35	08:06 18:20	07:33 (5) 18:20	08:26 (6) 16:19	08:08 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	07:22 (1) 21:38	05:13 22:11	04:49 21:51	06:12 20:50	07:10 19:32	08:08 18:18	07:34 (5) 18:18	08:27 (6) 16:18	08:10 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	07:24 (1) 21:40	05:11 22:11	04:49 21:49	06:14 20:47	07:12 19:30	08:10 18:15	07:35 (5) 18:15	08:28 (6) 16:16	08:12 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	07:26 (1) 21:41	05:10 22:11	04:49 21:48	06:16 20:45	07:14 19:27	08:12 18:13	07:36 (5) 18:13	08:30 (6) 16:15	08:13 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	07:28 (1) 21:43	05:08 22:11	04:50 21:46	06:18 20:42	07:16 19:24	08:14 18:11	07:37 (5) 18:11	08:33 (6) 16:14	08:15 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	07:30 (1) 21:44	05:07 22:11	04:50 21:45	06:20 20:40	07:17 19:22	08:16 18:08	07:38 (5) 18:08	08:36 (6) 16:12	08:17 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	07:32 (1) 21:46	05:05 22:11	04:51 21:43	06:22 20:38	07:19 19:19	08:18 18:00	07:39 (5) 18:00	08:39 (6) 16:11	08:19 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	06:39 (5) 21:47	05:04 22:11	04:51 21:41	06:23 20:35	07:21 19:17	08:21 18:00	07:40 (1) 18:00	08:41 (6) 16:10	08:21 16:05
28	08:27 16:56	07:23 18:00	07:48 (6) 18:56	05:57 20:56	06:37 (5) 21:49	05:03 22:11	04:52 21:40	06:25 20:33	07:23 19:14	08:22 18:00	07:41 (1) 18:00	08:42 (6) 16:09	08:22 16:06
29	08:26 16:58	07:21 18:02	07:50 (6) 18:56	05:55 20:58	06:34 (5) 21:50	05:02 22:10	04:52 21:38	06:27 20:30	07:25 19:12	08:23 18:00	07:42 (1) 18:00	08:43 (6) 16:08	08:24 16:07
30	08:24 17:00	07:18 18:03	07:32 (5) 19:58	05:53 20:58	06:32 (5) 21:50	05:00 22:10	04:53 21:36	06:29 20:30	07:27 19:09	08:24 18:00	07:43 (1) 18:00	08:44 (6) 16:07	08:26 16:07
31	08:22 17:02	07:16 18:06	07:29 (5) 19:58	05:51 21:00	06:30 (5) 21:52	04:59 22:10	05:34 21:36	06:31 20:28	07:28 19:09	08:25 18:00	07:44 (1) 18:00	08:45 (6) 16:07	08:28 16:08
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227	
Total, worst case			150			17			84		88		
Sun reduction		0,24				0,39			0,40		0,31		
Oper. time red.		1,00				1,00			1,00		1,00		
Wind dir. red.		0,96				0,98			1,00		0,97		
Total reduction		0,24				0,39			0,39		0,30		
Total, real		0				50			33		26		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: G - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (7)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	07:27 (5) 07:38 (5)	05:51 21:02	04:58 22:10	04:54 21:32	05:36 20:23	06:33 19:07	07:29 07:56 (1)	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	07:27 (5) 07:35 (5)	05:48 21:03	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:41 (6) 07:47 (6)	06:57 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	07:34 16:49	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	07:38 (6) 07:47 (6)	06:55 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	07:36 (6) 07:47 (6)	06:52 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:12 (6) 08:20 (6)	07:38 16:45
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	07:33 (6) 07:46 (6)	06:50 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:10 (6) 08:21 (6)	07:40 16:43
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	07:33 (6) 07:45 (6)	06:47 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:08 (6) 08:22 (6)	07:42 16:41
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	07:34 (6) 07:43 (6)	06:45 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	08:10 (6) 08:22 (6)	07:44 16:39
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	07:35 (6) 07:40 (6)	06:42 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	08:12 (6) 08:22 (6)	07:46 16:37
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	07:40 (6) 07:48 (6)	06:40 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:21 (5) 07:28 (5)	07:46 18:44	07:48 16:35
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	08:01 (6) 07:18 (1)	06:37 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:19 (5) 07:30 (5)	07:48 18:42	07:50 16:34
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:19 (1) 07:15 (1)	06:35 21:22	04:50 22:06	05:05 22:02	05:56 21:10	06:52 19:55	07:21 (5) 07:30 (5)	07:50 18:39	08:35 16:32
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	07:15 (1) 07:19 (1)	06:33 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:23 (5) 07:31 (5)	07:52 18:37	08:34 16:30
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	07:13 (1) 07:20 (1)	06:30 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:24 (5) 07:29 (5)	07:54 18:34	08:35 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	07:10 (1) 07:19 (1)	06:28 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:47	07:26 (5) 07:29 (5)	07:56 18:32	08:36 16:27
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	07:09 (1) 07:18 (1)	06:25 21:29	04:49 22:09	05:21 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	07:09 (1) 07:16 (1)	06:23 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:23	08:47 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	07:16 (1) 07:39 (5)	06:20 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	07:44 (6) 07:48 (6)	06:18 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	07:48 (6) 07:52 (6)	06:16 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	07:59 (6) 07:53 (6)	06:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	07:59 (6) 07:53 (6)	06:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	07:59 (6) 07:53 (6)	06:09 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	07:59 (6) 07:53 (6)	06:06 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	07:59 (6) 07:53 (6)	06:04 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:16 17:08	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	07:59 (6) 07:53 (6)	06:02 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:52 (1) 07:57 (1)	07:18 17:06	08:19 16:11
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	07:59 (6) 07:53 (6)	05:59 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:50 (1) 07:59 (1)	07:20 17:04	08:21 16:10
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	07:59 (6) 07:53 (6)	05:57 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	07:50 (1) 07:59 (1)	07:22 17:02	08:22 16:09
29	08:26 16:58	07:21 19:58	06:10 19:58	05:55 20:58	07:59 (6) 07:53 (6)	05:55 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	07:52 (1) 07:59 (1)	07:24 17:00	08:24 16:07
30	08:24 17:00	07:08 20:00	07:08 20:00	05:53 21:00	07:59 (6) 07:53 (6)	05:53 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	07:54 (1) 07:59 (1)	07:26 16:57	08:26 16:08
31	08:22 17:02	07:05 20:01	07:05 20:01	05:53 21:00	07:59 (6) 07:53 (6)	05:53 21:53	04:53 22:10	05:34 21:34	06:31 20:25	07:28 16:55	07:59 (1) 07:59 (1)	07:28 16:55	08:53 16:09
Potential sun hours	244	270	366	422		499	517	519	464	383	327	254	227
Total, worst case			128		19					78		70	
Sun reduction			0,34		0,39					0,40		0,31	
Oper. time red.			1,00		1,00					1,00		1,00	
Wind dir. red.			0,98		1,00					1,00		0,97	
Total reduction			0,33		0,39					0,39		0,30	
Total, real			43		7					31		21	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53	08:20	07:20	17:11 (5)	07:02	05:50
	16:10	17:04	18:02	21	17:32 (5)	20:03
2	08:53	08:19	16:29 (1)	07:18	17:12 (5)	07:00
	16:11	17:06	4 16:33 (6)	18:04	20	17:32 (5)
3	08:52	08:17	16:27 (1)	07:15	17:11 (5)	06:57
	16:13	17:08	8 16:35 (6)	18:06	20	17:31 (5)
4	08:52	08:15	16:27 (1)	07:13	17:12 (5)	06:55
	16:14	17:10	10 16:37 (6)	18:08	19	17:31 (5)
5	08:52	08:13	16:26 (1)	07:11	17:13 (5)	06:52
	16:15	17:12	14 16:40 (6)	18:10	16	17:29 (5)
6	08:51	08:11	16:26 (1)	07:08	17:14 (5)	06:50
	16:16	17:14	16 16:42 (6)	18:12	14	17:28 (5)
7	08:51	08:09	16:26 (1)	07:06	17:16 (5)	06:47
	16:18	17:16	19 16:45 (6)	18:14	9	17:25 (5)
8	08:50	08:07	16:26 (1)	07:03	06:45	05:36
	16:19	17:18	18 16:44 (6)	18:16	20:17	21:15
9	08:49	08:05	16:27 (1)	07:01	06:42	05:34
	16:21	17:20	17 16:44 (6)	18:18	20:19	21:17
10	08:49	08:03	16:26 (1)	06:58	06:40	05:32
	16:22	17:23	15 16:41 (6)	18:20	20:21	21:18
11	08:48	08:01	16:27 (1)	06:56	06:37	05:30
	16:24	17:25	13 16:40 (1)	18:22	20:23	21:20
12	08:47	07:59	16:29 (1)	06:53	06:35	05:28
	16:26	17:27	10 16:39 (1)	18:24	20:25	21:22
13	08:46	07:57	16:31 (1)	06:51	06:32	05:26
	16:27	17:29	7 16:38 (1)	18:26	20:27	21:24
14	08:45	07:55	06:48	06:30	06:30	05:24
	16:29	17:31	18:28	20:29	21:26	22:07
15	08:44	07:52	06:46	06:28	06:28	05:22
	16:31	17:33	18:30	20:30	21:28	22:08
16	08:43	07:50	06:43	06:25	06:25	05:21
	16:32	17:35	18:32	20:32	21:29	22:08
17	08:42	07:48	06:41	06:23	06:23	05:19
	16:34	17:37	18:34	20:34	21:31	22:09
18	08:41	07:46	06:38	06:20	06:20	05:17
	16:36	17:39	18:36	20:36	21:33	22:09
19	08:40	07:44	06:35	06:18	06:18	05:16
	16:38	17:41	18:38	20:38	21:34	22:10
20	08:39	07:41	06:33	06:15	06:15	05:14
	16:40	17:43	18:40	20:40	21:36	22:10
21	08:37	07:39	06:30	06:13	06:13	05:12
	16:42	17:46	18:42	20:42	21:38	22:10
22	08:36	07:37	06:28	06:11	06:11	05:11
	16:44	17:48	18:44	20:44	21:39	22:11
23	08:35	07:34	17:18 (5)	06:25	06:08	05:09
	16:45	17:50	3 17:21 (5)	18:46	20:46	21:41
24	08:33	07:32	17:16 (5)	06:23	06:06	05:08
	16:47	17:52	7 17:23 (5)	18:48	20:48	21:43
25	08:32	07:30	17:14 (5)	06:20	06:04	05:07
	16:49	17:54	11 17:25 (5)	18:50	20:50	21:44
26	08:30	07:27	17:13 (5)	06:18	06:02	05:05
	16:51	17:56	15 17:28 (5)	18:52	10 18:00 (2)	20:52
27	08:29	07:25	17:12 (5)	06:15	17:56 (2)	05:59
	16:53	17:58	17 17:29 (5)	18:54	16 18:12 (2)	20:54
28	08:27	07:23	17:12 (5)	06:13	17:54 (2)	05:57
	16:55	18:00	20 17:32 (5)	18:56	20 18:14 (2)	20:56
29	08:25		07:10	06:10	18:52 (2)	05:55
	16:57		19:57	23 19:15 (2)	20:58	21:50
30	08:24		07:07	06:07	18:51 (2)	05:53
	17:00		19:59	26 19:17 (2)	21:00	21:52
31	08:22		07:05	06:05	18:49 (2)	04:59
	17:02		20:01	28 19:17 (2)	21:53	22:10
Potential sun hours	244	270	366	422	499	517
Total, worst case		224	242			
Sun reduction		0,24	0,34			
Oper. time red.		1,00	1,00			
Wind dir. red.		0,85	0,96			
Total reduction		0,20	0,32			
Total, real		46	78			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December					
1	04:53	05:35	06:33	18:47 (2)	07:29	07:30	15:56 (1)	08:27			
	22:10	21:32	20:23	19:10 (2)	19:06	16:53	15	16:11 (6)	16:06		
2	04:54	05:37	06:34	18:46 (2)	07:30	07:32	15:55 (1)	08:29			
	22:09	21:30	20:20	19:11 (2)	19:04	16:51	17	16:12 (6)	16:05		
3	04:55	05:39	06:36	18:44 (2)	07:32	07:34	15:56 (1)	08:30			
	22:09	21:28	20:18	19:11 (2)	19:01	16:49	18	16:14 (6)	16:04		
4	04:56	05:41	06:38	18:43 (2)	07:34	07:36	15:56 (1)	08:32			
	22:08	21:26	20:15	19:12 (2)	18:59	16:47	18	16:14 (6)	16:04		
5	04:57	05:43	06:40	18:42 (2)	07:36	07:38	15:56 (1)	08:33			
	22:08	21:24	20:13	19:12 (2)	18:56	16:45	16	16:12 (6)	16:03		
6	04:58	05:44	06:42	18:42 (2)	07:38	17:55 (5)	07:40	15:56 (1)	08:35		
	22:07	21:22	20:10	19:12 (2)	18:54	5	18:00 (5)	16:43	13	16:09 (6)	16:02
7	04:59	05:46	06:44	18:42 (2)	07:40	17:52 (5)	07:42	15:57 (1)	08:36		
	22:06	21:20	20:08	19:12 (2)	18:51	11	18:03 (5)	16:41	11	16:08 (6)	16:02
8	05:00	05:48	06:46	18:40 (2)	07:42	17:49 (5)	07:44	15:58 (1)	08:38		
	22:06	21:18	20:05	19:11 (2)	18:49	15	18:04 (5)	16:39	8	16:06 (6)	16:01
9	05:01	05:50	06:47	18:40 (2)	07:44	17:47 (5)	07:46	16:00 (1)	08:39		
	22:05	21:16	20:03	19:11 (2)	18:46	17	18:04 (5)	16:37	3	16:03 (6)	16:01
10	05:02	05:52	06:49	18:40 (2)	07:46	17:47 (5)	07:48	08:40			
	22:04	21:14	20:00	19:10 (2)	18:44	19	18:06 (5)	16:35	16:01		
11	05:03	05:54	06:51	18:41 (2)	07:48	17:46 (5)	07:50	08:41			
	22:03	21:12	19:58	19:10 (2)	18:41	20	18:06 (5)	16:33	16:00		
12	05:04	05:55	06:53	18:41 (2)	07:50	17:46 (5)	07:52	08:42			
	22:02	21:10	19:55	19:09 (2)	18:39	20	18:06 (5)	16:32	16:00		
13	05:06	05:57	06:55	18:41 (2)	07:52	17:45 (5)	07:54	08:44			
	22:01	21:08	19:52	19:07 (2)	18:36	21	18:06 (5)	16:30	16:00		
14	05:07	05:59	06:57	18:42 (2)	07:54	17:45 (5)	07:56	08:45			
	22:00	21:05	19:50	19:06 (2)	18:34	19	18:04 (5)	16:28	16:00		
15	05:08	06:01	06:59	18:43 (2)	07:56	17:45 (5)	07:58	08:46			
	21:59	21:03	19:47	19:04 (2)	18:32	16	18:01 (5)	16:27	16:00		
16	05:10	06:03	07:00	18:45 (2)	07:57	17:46 (5)	08:00	08:47			
	21:57	21:01	19:45	19:02 (2)	18:29	13	17:59 (5)	16:25	16:00		
17	05:11	06:05	07:02	18:47 (2)	07:59	17:46 (5)	08:02	08:47			
	21:56	20:59	19:42	18:59 (2)	18:27	10	17:56 (5)	16:23	16:00		
18	05:13	06:06	07:04	08:01	17:48 (5)	08:04	08:48				
	21:55	20:56	19:40	18:24	6	17:54 (5)	16:22	16:00			
19	05:14	06:08	07:06	08:03	17:50 (5)	08:06	08:49				
	21:54	20:54	19:37	18:22	1	17:51 (5)	16:20	16:01			
20	05:16	06:10	07:08	08:05	08:08	08:08	08:50				
	21:52	20:52	19:35	18:20	16:19	16:01					
21	05:17	06:12	07:10	08:07	08:10	08:50					
	21:51	20:49	19:32	18:17	16:17	16:01					
22	05:19	06:14	07:12	08:09	08:11	08:51					
	21:49	20:47	19:29	18:15	16:16	16:02					
23	05:20	06:16	07:14	08:11	08:13	08:51					
	21:48	20:45	19:27	18:13	16:15	16:02					
24	05:22	06:18	07:15	08:13	08:15	08:52					
	21:46	20:42	19:24	18:10	16:13	16:03					
25	05:23	06:20	07:17	07:15	08:17	08:52					
	21:45	20:40	19:22	17:08	16:12	16:03					
26	05:25	06:21	07:19	07:17	08:19	08:52					
	21:43	20:37	19:19	17:06	16:11	16:04					
27	05:27	06:23	07:21	07:19	08:20	08:53					
	21:41	20:35	19:17	17:04	16:10	16:05					
28	05:28	06:25	07:23	07:21	08:22	08:53					
	21:39	20:33	19:14	17:02	16:09	16:06					
29	05:30	06:27	18:55 (2)	07:25	07:24	16:00 (1)	08:24	08:53			
	21:38	20:30	11	19:06 (2)	19:11	16:59	8	16:08 (1)	16:08	16:07	
30	05:32	06:29	18:51 (2)	07:27	07:26	15:58 (1)	08:26	08:53			
	21:36	20:28	16	19:07 (2)	19:09	16:57	11	16:09 (1)	16:07	16:08	
31	05:34	06:31	18:49 (2)	07:28	07:28	15:57 (1)	08:53				
	21:34	20:25	20	19:09 (2)	16:55	13	16:10 (1)	16:09			
Potential sun hours	519	464	383	327	254	227					
Total, worst case		47	443	225	119						
Sun reduction		0,52	0,40	0,31	0,16						
Oper. time red.		1,00	1,00	1,00	1,00						
Wind dir. red.		1,00	1,00	0,91	0,81						
Total reduction		0,51	0,39	0,27	0,12						
Total, real		24	172	62	15						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: I - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times and shadow reduction percentages. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53	08:27 16:06	
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	08:06 (6) 08:11 (6)	08:29 16:05	
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	08:13 (6) 08:13 (6)	08:31 16:05	
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 08:14 (6)	08:32 16:04	
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 20:11	06:52 21:09	05:42 21:59	04:55 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (6) 08:14 (6)	08:34 16:03	
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (6) 20:13	06:50 21:11	05:40 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:06 (6) 08:14 (6)	08:35 16:03	
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (6) 20:15	06:47 21:13	05:38 22:01	04:53 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:08 (6) 08:13 (6)	08:36 16:02	
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (6) 20:17	06:45 21:15	05:36 22:02	04:52 22:06	05:00 21:18	06:46 20:05	07:42 18:49	08:10 (6) 08:13 (6)	08:38 16:02	
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 20:19	06:42 21:17	05:34 22:03	04:52 22:05	05:01 21:16	06:48 20:03	07:44 18:46	07:46 07:48	08:39 16:01	
10	08:49 16:23	08:03 17:23	06:58 18:20	07:24 (6) 20:21	06:40 21:19	05:32 22:04	04:51 22:04	05:02 21:14	06:50 20:00	07:46 18:44	07:48 07:48	08:40 16:01	
11	08:48 16:24	08:01 17:25	06:56 18:22	07:25 (6) 20:23	06:37 21:20	05:30 22:05	04:51 22:03	05:03 21:12	06:51 19:58	07:48 18:42	07:50 07:52	08:41 16:01	
12	08:47 16:26	07:59 17:27	06:53 18:24	07:33 (6) 20:25	06:35 21:22	05:28 22:06	04:50 22:02	05:05 21:10	06:53 19:55	07:50 18:39	07:52 07:54	08:43 16:00	
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00	
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	06:57 07:56	08:45 16:00	
15	08:45 16:31	07:53 17:33	06:46 18:30	07:10 (1) 20:31	06:28 21:28	05:23 22:08	04:49 21:59	05:09 21:03	06:59 19:47	07:56 18:32	06:59 07:01	08:46 16:00	
16	08:44 16:33	07:50 17:35	06:43 18:32	07:12 (1) 20:31	06:25 21:28	05:21 22:09	04:49 21:58	06:03 21:01	07:01 19:45	07:58 18:29	07:01 07:02	08:47 16:00	
17	08:42 16:34	07:48 17:37	06:41 18:34	07:13 (1) 20:33	06:23 21:29	05:19 22:09	04:49 21:58	06:05 21:01	07:02 19:42	08:00 18:27	07:02 07:04	08:48 16:00	
18	08:41 16:36	07:46 17:39	06:38 18:36	07:12 (1) 20:35	06:20 21:31	05:17 22:09	04:49 21:56	06:07 20:59	07:04 19:42	08:02 18:27	07:04 07:04	08:48 16:00	
19	08:40 16:38	07:44 17:42	06:36 18:38	07:11 (1) 20:36	06:18 21:33	05:16 22:10	04:49 21:55	06:09 20:57	07:06 19:40	08:04 18:25	07:04 07:06	08:49 16:00	
20	08:39 16:40	07:42 17:44	06:33 18:40	07:04 (1) 20:38	06:18 21:35	05:14 22:10	04:49 21:54	06:10 20:54	07:08 19:37	08:06 18:22	07:08 07:10	08:50 16:01	
21	08:38 16:42	07:39 17:46	06:31 18:42	06:16 20:40	05:14 21:36	04:49 22:10	04:49 21:52	05:16 20:52	07:08 19:35	08:06 18:20	07:10 07:10	08:50 16:01	
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	04:49 21:49	05:19 20:47	07:12 19:30	08:10 18:15	07:12 07:14	08:51 16:02	
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	04:49 21:48	06:16 20:45	07:14 19:27	08:12 18:13	07:14 07:16	08:51 16:02	
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	07:16 07:16	08:52 16:03	
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:16 17:08	07:16 07:16	08:52 16:04	
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	08:19 17:06	07:19 07:19	08:52 16:04	
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:21 17:04	07:21 07:21	08:53 16:05	
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	08:22 17:02	07:23 07:23	08:53 16:06	
29	08:26 16:58	07:20 19:58	06:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	08:24 17:00	07:25 07:26	08:53 16:07	
30	08:24 17:00	07:18 20:00	06:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	08:26 16:57	07:27 07:28	08:53 16:08	
31	08:22 17:02	07:15 20:01	06:05 20:01	04:59 21:53	05:00 21:53	04:59 22:10	05:34 21:34	06:31 20:25	19:09 16:55	08:28 16:55	07:28 07:28	08:53 16:09	
Potential sun hours	244	270	366	422	499	517	519	464	383	29	53	254	227
Total, worst case										29	53		
Sun reduction			0,34							0,40	0,31		
Oper. time red.			1,00							1,00	1,00		
Wind dir. red.			0,98							1,00	0,98		
Total reduction			0,34							0,39	0,30		
Total, real			27							11	16		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: K - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1-31) showing sun rise/set times, shadow reduction factors, and potential sun hours.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:56 (6) 08:06 (6)	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:58 (6) 08:06 (6)	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:37 20:18	07:33 19:01	08:00 (6) 08:06 (6)	07:34 16:49	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 08:06 (6)	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (6) 08:05 (6)	07:38 16:45	08:34 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:05 (6)	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:06 (6)	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	08:07 (6)	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 06:42	05:34 20:19	04:52 21:17	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	08:08 (6)	07:46 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	07:23 (6) 06:40	05:32 20:21	04:51 21:19	05:02 22:04	05:52 21:14	06:50 20:00	07:46 18:44	08:09 (6)	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (6) 06:37	05:30 20:23	04:51 21:20	05:03 22:05	05:54 21:12	06:51 19:58	07:48 18:42	08:10 (6)	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	07:18 (6) 06:35	05:28 20:25	04:50 21:22	05:05 22:06	05:56 21:10	06:53 19:55	07:50 18:39	08:11 (6)	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	07:17 (6) 06:33	05:26 20:27	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	08:12 (6)	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	07:20 (6) 06:30	05:24 20:29	04:50 21:26	05:07 22:07	05:59 21:06	06:57 19:50	07:54 18:34	08:13 (6)	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	07:23 (6) 06:28	05:23 20:29	04:49 21:28	05:09 22:08	06:01 21:03	06:59 19:48	07:56 18:32	08:14 (6)	07:58 16:27	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:15 (6)	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:35	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:16 (6)	08:02 16:24	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:17 (6)	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:18 (6)	08:06 16:20	08:49 16:01
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:19 (6)	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:20 (6)	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:21 (6)	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:50 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:22 (6)	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:23 (6)	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:16 17:08	08:24 (6)	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	08:18 17:06	08:25 (6)	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:20 17:04	08:26 (6)	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	08:22 17:02	08:27 (6)	08:22 16:09	08:53 16:06
29	08:26 16:58	07:10 19:58	06:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	08:24 17:00	08:28 (6)	08:24 16:08	08:53 16:07
30	08:24 17:00	07:08 20:00	06:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	08:26 16:57	08:29 (6) 08:04 (6)	08:26 16:07	08:53 16:08
31	08:22 17:02	07:05 20:01	06:05 20:01	05:51 21:53	05:00 21:53	04:59 21:34	05:34 20:25	06:31 20:25	07:28 16:55	08:28 16:55	08:31 (6)	08:28 16:07	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227	
Total, worst case													
Sun reduction			36						7	29			
Oper. time red.			0,34						0,40	0,31			
Wind dir. red.			1,00						1,00	1,00			
Total reduction			0,99						0,99	0,99			
Total, real			0,34						0,39	0,30			
			12						3	9			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E70 Shut downShadow receptor: M - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

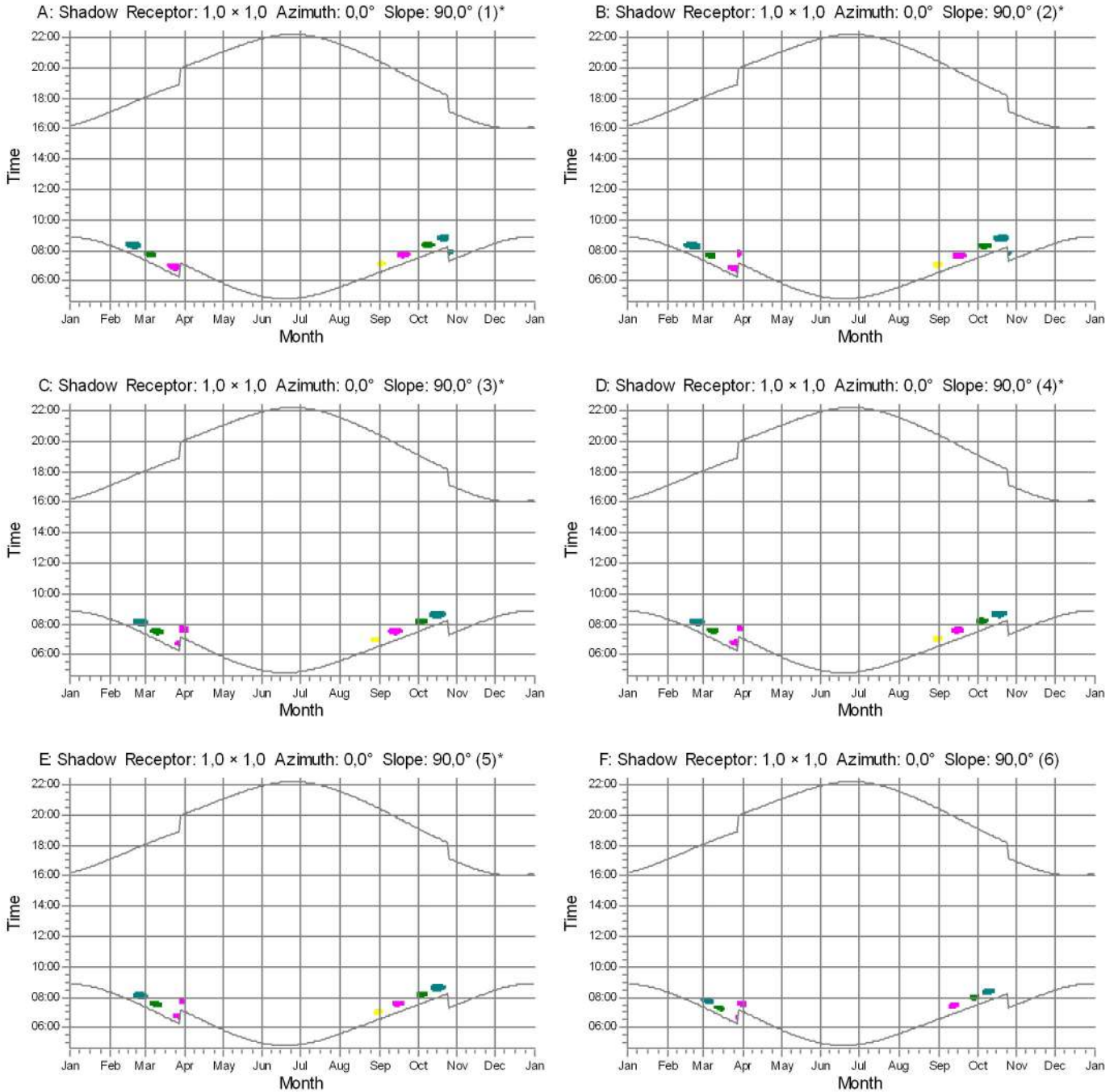
	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:51	04:58	04:54	05:36	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:55	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:24	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:02
9	08:49	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:01
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:55	06:53	07:50	07:52	08:42
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:33	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:50	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:33	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:34	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:13	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:18	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:39	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
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25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:15	08:17	08:52
	16:50	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:27	06:18	06:02	05:05	04:51	05:25	06:22	07:19	08:17	08:19	08:52
	16:52	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:20	08:53
	16:54	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	08:21	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:01	16:09	16:06
29	08:25		07:10	05:55	05:02	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E70 Shut down



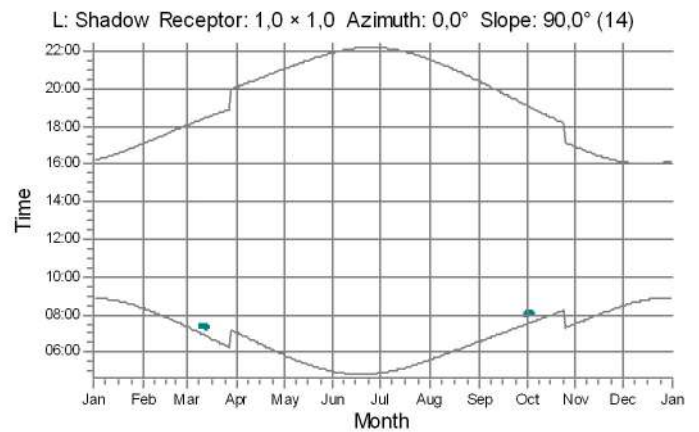
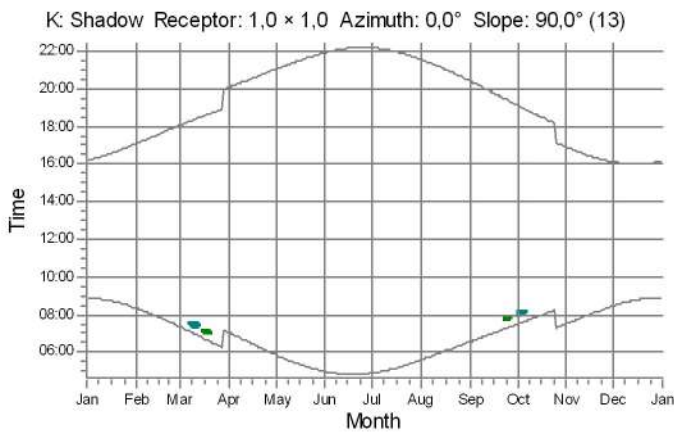
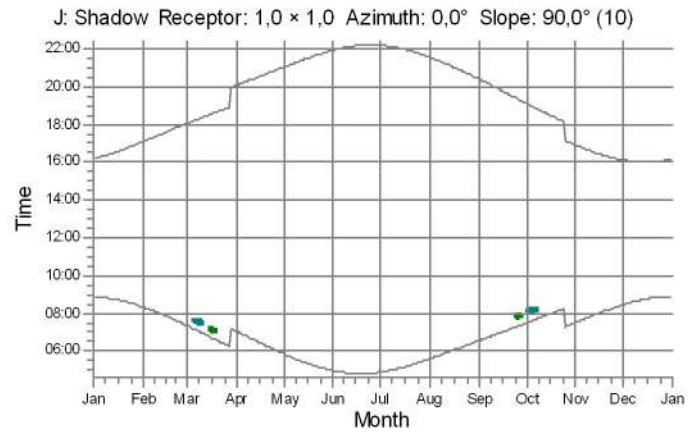
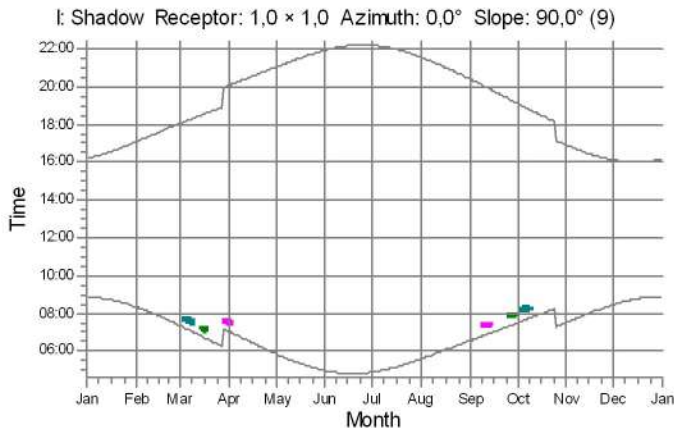
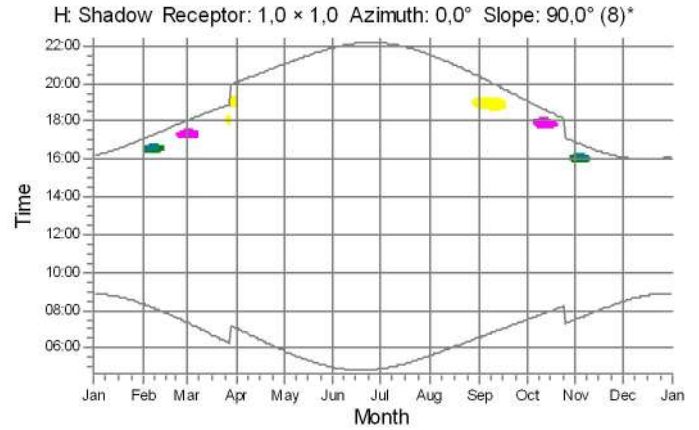
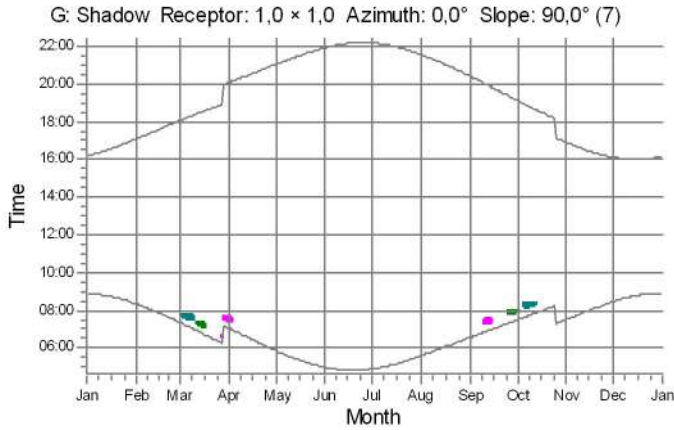
WTGs

- 1: ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)
- 2: ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)
- 5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E70 Shut down



WTGs

- 1: ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)
- 2: ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)
- 5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

* Results reduced by flicker curtailment

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

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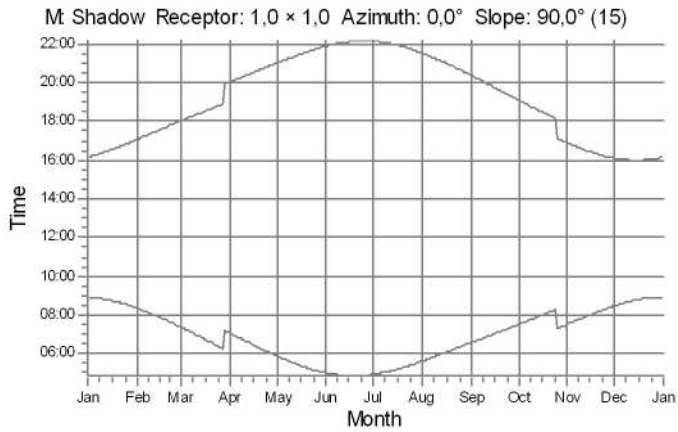
Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

2021.06.16 11:06/3.4.415

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E70 Shut down



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E70 Shut downWTG: 1 - ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and multiple rows for days, showing start and end times for shadow events and a summary row for 'Potential sun hours' and 'Sum of minutes with flicker'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E70 Shut downWTG: 2 - ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 matrix of times (Sun rise, Sun set, First time with flicker, Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each month's data.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E70 Shut downWTG: 3 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:22	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E70 Shut downWTG: 4 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:30	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:02	16:09	16:06
29	08:25		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E70 Shut downWTG: 5 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a matrix of sun rise/set times and operational status (0/1) for each hour of the day.

Potential sun hours | 244 | 270 | 366 | 422 | 47 | 499 | 0 | 0 | 519 | 0 | 464 | 383 | 327 | 193 | 254 | 0 | 227 | 0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E70 Shut downWTG: 6 - ENERCON E-82 2000 82.0 !OI! hub: 78,3 m (TOT: 119,3 m) (10)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (e.g., 08:53 | 17:04) and a numerical value. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

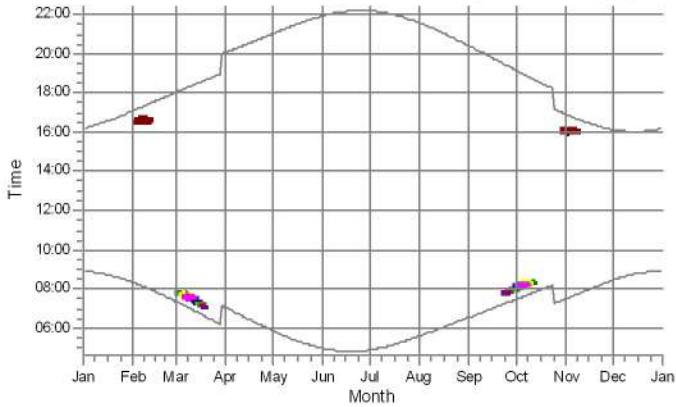
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Calculated:
2021.06.16 11:06/3.4.415

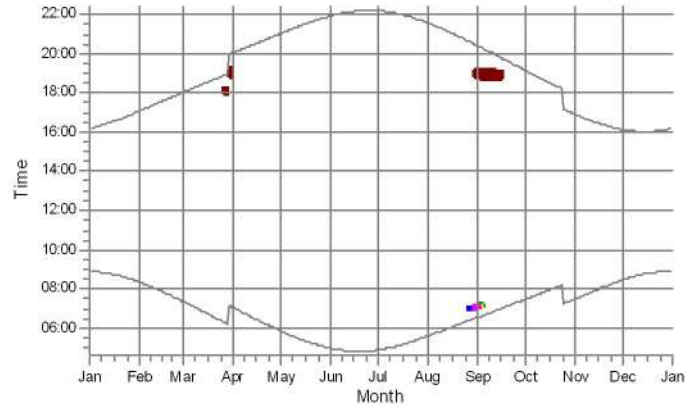
SHADOW - Calendar per WTG, graphical

Calculation: Planuojamos Enercon E70 Shut down

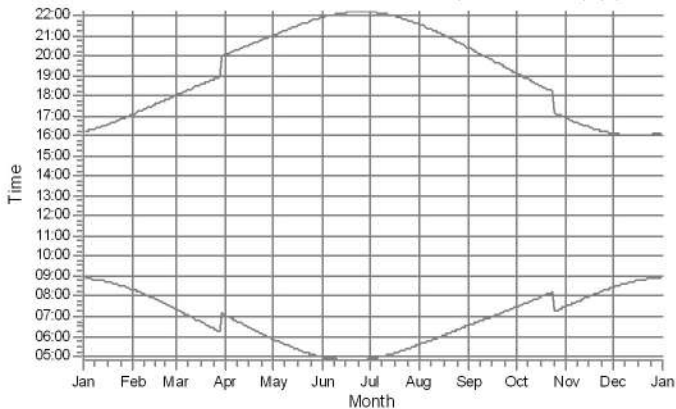
1: ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)



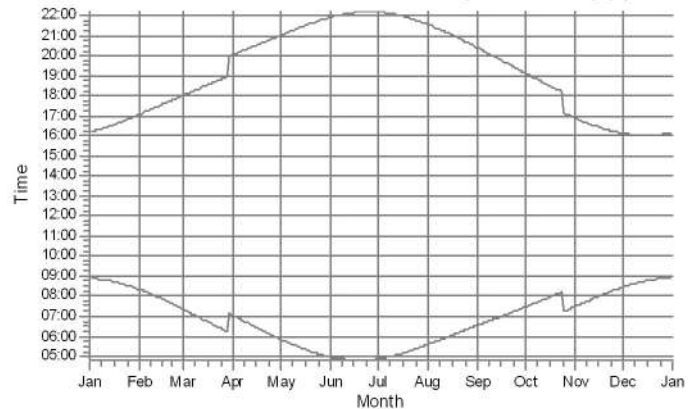
2: ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)



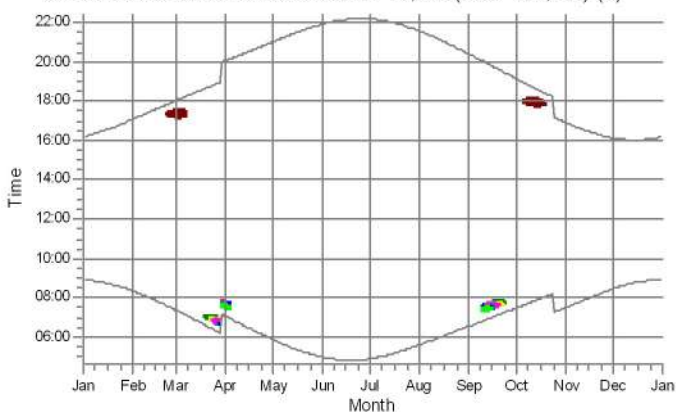
3: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)



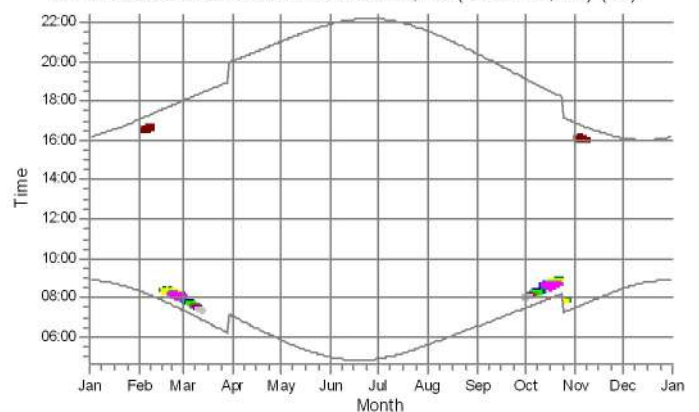
4: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)



5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)



6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)*
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)*
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)*
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)*
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)*
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)

- G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)*
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

* Results reduced by flicker curtailment

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E70 Shut downWTG: 1 - ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

1												
2												
3												
4												
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6												
7												
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30												
31												

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E70 Shut downWTG: 2 - ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1				18:49-19:18								
2				18:47-19:17								
3				18:47-19:18								
4				18:46-19:17								
5				18:46-19:17								
6				18:46-19:16								
7				18:46-19:16 07:12-07:15								
8				18:46-19:15 07:09-07:14								
9				18:47-19:14 07:07-07:14								
10				18:47-19:12 07:04-07:13								
11				18:48-19:11 07:02-07:12								
12				18:49-19:09 07:00-07:10								
13				18:51-19:07 06:57-07:07								
14				18:55-19:04 06:55-07:06								
15				06:52-07:01								
16				06:52-07:00								
17				06:54-06:58								
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

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Calculated:

2021.06.16 11:06/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E70 Shut downWTG: 3 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
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31												

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E70 Shut downWTG: 4 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
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17												
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20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:

2021.06.16 11:06/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E70 Shut downWTG: 5 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
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18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 11:06/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E70 Shut downWTG: 6 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

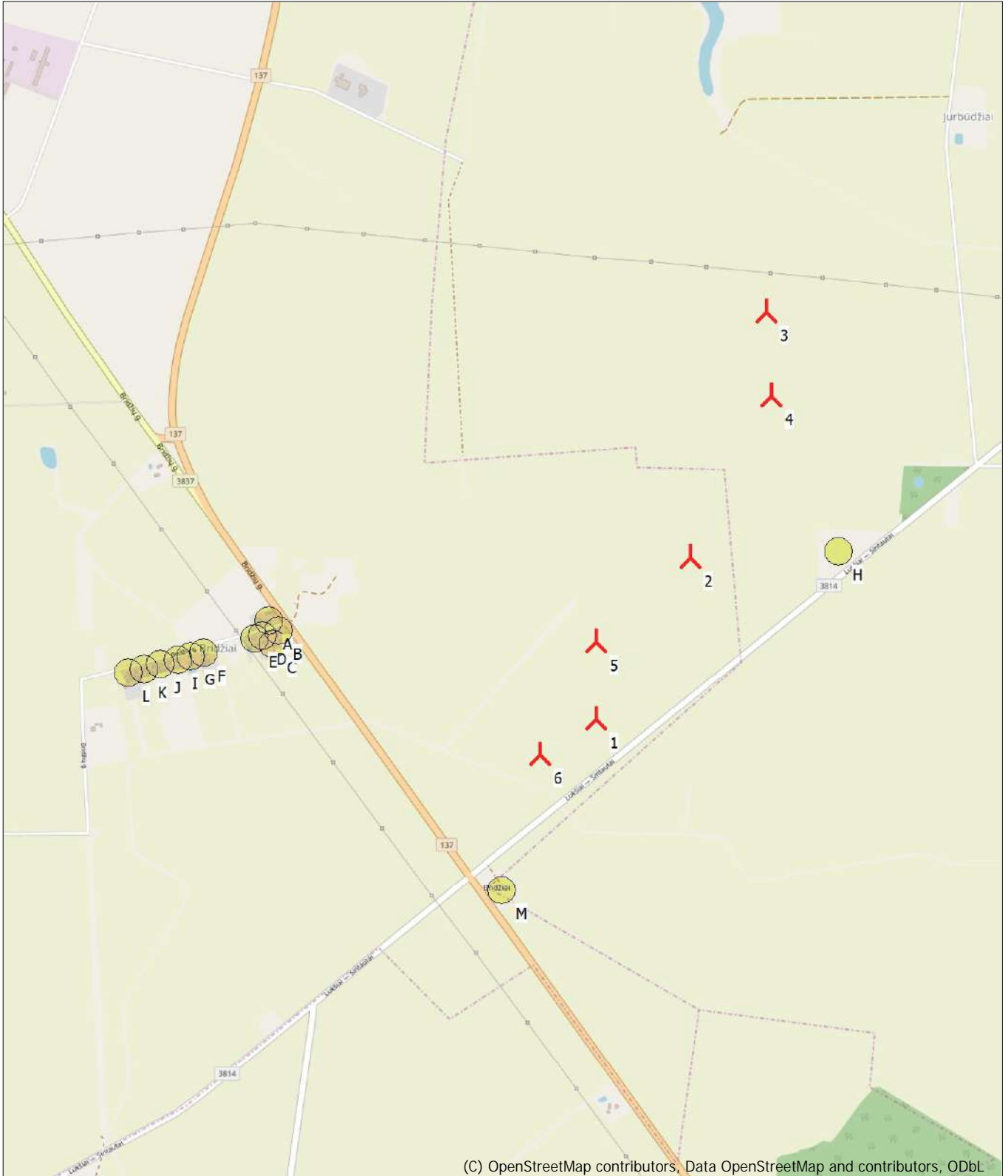
Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
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29												
30												
31												

SHADOW - Map

Calculation: Planuojamos Enercon E70 Shut down



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL

0 250 500 750 1000m

Map: EMD OpenStreetMap, Print scale 1:20.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 441.861 North: 6.087.769
New WTG Shadow receptor

Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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 Raminta Survilè / r.surville@infraplanas.lt
 Calculated:
 2021.06.16 10:15/3.4.415

SHADOW - Main Result

Calculation: Planuojamos Enercon E82

Assumptions for shadow calculations

Maximum distance for influence
 Calculate only when more than 20 % of sun is covered by the blade
 Please look in WTG table

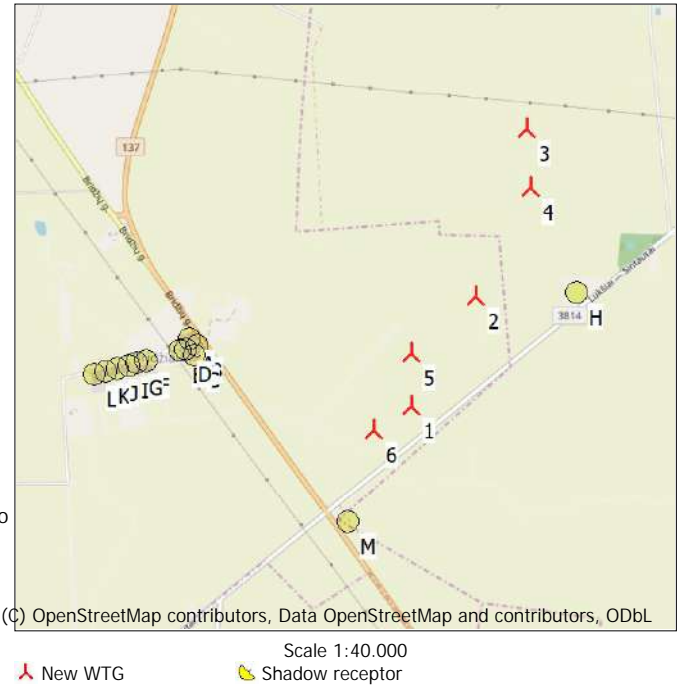
Minimum sun height over horizon for influence 3 °
 Day step for calculation 1 days
 Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
 Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo
 Obstacles used in calculation
 Eye height for map: 1,5 m
 Grid resolution: 1,0 m

All coordinates are in
 Lithuanian TM LKS94-LKS94 (LT)
 WTGs



	Y	X	Z	Row data/Description	WTG type			Shadow data				
					Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Calculation distance [m]	RPM [RPM]
1	442.261	6.087.347	50,0	ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
2	442.609	6.087.922	50,0	ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
3	442.891	6.088.803	50,3	ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
4	442.908	6.088.497	50,0	ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
5	442.265	6.087.626	50,0	ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
6	442.058	6.087.221	50,0	ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5

Shadow receptor-Input

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Calculation Results

Shadow receptor
 Shadow, expected values

No.	Shadow hours per year [h/year]
A	3:39
B	4:07

To be continued on next page...

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Main Result

Calculation: Planuojamos Enercon E82

...continued from previous page

Shadow, expected values

No.	Shadow hours per year [h/year]
C	4:07
D	3:05
E	2:52
F	1:58
G	1:44
H	11:01
I	1:34
J	0:32
K	0:28
L	0:23
M	0:00

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Expected [h/year]
1	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (1)	13:58	3:43
2	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (2)	24:30	9:37
3	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)	0:00	0:00
4	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)	0:00	0:00
5	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)	14:21	4:46
6	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)	18:05	4:43

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:46 (1) 20:03	07:03 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (1) 20:05	07:00 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (1) 20:07	06:57 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (1) 20:09	06:55 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 20:11	06:52 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:36 (1) 20:13	06:50 21:11	04:54 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	07:36 (1) 20:15	06:47 21:13	04:53 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	07:39 (1) 20:17	06:45 21:15	04:52 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:46 (1) 20:19	06:42 21:17	04:52 22:03
10	08:49 16:22	08:03 17:23	06:58 18:20	07:39 (1) 20:21	06:40 21:19	04:51 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	07:46 (1) 20:23	06:37 21:20	04:51 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	07:39 (1) 20:25	06:35 21:22	04:50 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	07:46 (1) 20:27	06:33 21:24	04:50 22:07
14	08:46 16:29	07:55 17:31	08:22 (6) 18:28	06:30 20:29	05:24 21:26	04:50 22:07
15	08:45 16:31	07:53 17:33	08:19 (6) 18:30	06:28 20:31	05:23 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	08:17 (6) 18:32	06:25 20:33	05:21 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	08:15 (6) 18:34	06:23 20:34	05:19 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	08:12 (6) 18:36	06:20 20:36	05:17 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	08:10 (6) 18:38	07:00 (5) 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	08:10 (6) 18:40	06:57 (5) 20:40	05:14 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	08:10 (6) 18:42	06:55 (5) 20:42	05:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	08:11 (6) 18:44	06:52 (5) 20:44	05:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	08:12 (6) 18:46	06:50 (5) 20:46	05:10 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	08:14 (6) 18:48	06:47 (5) 20:48	05:08 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	08:22 (6) 18:50	06:47 (5) 20:50	05:07 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	06:18 18:52	06:48 (5) 20:52	05:05 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 18:54	06:49 (5) 20:54	05:04 21:47	04:51 22:11
28	08:27 16:56	07:23 18:00	07:48 (1) 18:56	06:13 20:56	05:03 21:49	04:52 22:11
29	08:26 16:58	07:21 18:02	07:49 (1) 19:00	06:11 20:58	05:02 21:50	04:52 22:10
30	08:24 17:00	07:19 18:04	07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10
31	08:22 17:02	07:17 18:06	07:05 20:01	05:51 21:02	04:59 21:53	04:53 22:10
Potential sun hours	244	270	366	422	499	517
Total, worst case		135	178	36		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,91	0,98	0,98		
Total reduction		0,22	0,33	0,39		
Total, real		30	59	14		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December	
1	04:54 22:10	05:36 21:32	06:33 20:23	07:02 (2) 19:07	07:29 16:53	08:27 16:06	
2	04:54 22:09	05:37 21:30	06:35 20:20	07:03 (2) 19:04	07:31 16:51	08:29 16:05	
3	04:55 22:09	05:39 21:29	06:36 20:18	07:05 (2) 19:01	07:32 16:49	08:30 16:05	
4	04:56 22:08	05:41 21:27	06:38 20:15	07:06 (2) 18:59	07:34 16:47	08:32 16:04	
5	04:57 22:08	05:43 21:25	06:40 20:13	07:08 (2) 18:56	07:36 16:45	08:34 16:03	
6	04:58 22:07	05:45 21:23	06:42 20:10	07:10 (2) 18:54	07:38 16:43	08:35 16:03	
7	04:59 22:06	05:46 21:21	06:44 20:08	07:11 (2) 18:51	07:40 16:41	08:36 16:02	
8	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	13 15	08:25 (1) 16:39	16:41 16:02
9	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	14	08:12 (1) 16:37	07:46 16:01
10	05:02 22:04	05:52 21:14	06:49 20:00	07:46 18:44	12	08:14 (1) 16:35	07:48 16:01
11	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:41	9	08:16 (1) 16:34	07:50 16:01
12	05:05 22:02	05:55 21:10	06:53 19:55	07:50 18:39	7	08:18 (1) 16:32	07:52 16:00
13	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	3	08:20 (1) 16:30	07:54 16:00
14	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34		08:23 (1) 16:28	07:56 16:00
15	05:08 21:59	06:01 21:03	06:59 19:47	07:56 18:32		07:58 16:27	08:46 16:00
16	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	8	08:00 16:25	08:47 16:00
17	05:11 21:56	06:05 20:59	07:02 19:42	07:37 (5) 18:27	3	08:02 16:23	08:47 16:00
18	05:13 21:55	06:07 20:57	07:04 19:40	07:49 (5) 18:25	10	08:44 (6) 16:22	08:48 16:00
19	05:14 21:54	06:08 20:54	07:06 19:37	07:34 (5) 18:22	14	08:54 (6) 16:20	08:06 16:01
20	05:16 21:52	06:10 20:52	07:08 19:35	07:35 (5) 18:20	16	08:41 (6) 16:19	08:08 16:01
21	05:17 21:51	06:12 20:50	07:10 19:32	07:37 (5) 18:18	17	08:57 (6) 16:18	08:10 16:01
22	05:19 21:49	06:14 20:47	07:12 19:30	07:39 (5) 18:15	18	08:40 (6) 16:16	08:12 16:02
23	05:20 21:48	06:16 20:45	07:14 19:27	07:41 (5) 18:13	17	08:41 (6) 16:15	08:13 16:02
24	05:22 21:46	06:18 20:42	07:16 19:24	07:43 (5) 18:11	14	08:43 (6) 16:14	08:15 16:03
25	05:24 21:45	06:20 20:40	07:17 19:22	07:46 (5) 17:08	12	08:57 (6) 16:12	08:17 16:04
26	05:25 21:43	06:22 20:38	07:19 19:19	07:48 (5) 17:06	9	07:45 (6) 16:11	08:19 16:04
27	05:27 21:41	06:23 20:35	07:21 19:17	07:49 (5) 17:04	6	07:47 (6) 16:10	08:21 16:05
28	05:29 21:40	06:25 20:33	07:23 19:14	07:52 (5) 17:02	2	07:55 (6) 16:09	08:22 16:06
29	05:30 21:38	06:27 20:30	07:25 19:12	07:54 (5) 17:00		07:54 (6) 16:08	08:24 16:07
30	05:32 21:36	06:29 20:28	07:27 19:09	07:24 16:57		08:26 16:07	08:53 16:08
31	05:34 21:34	06:31 20:25	07:05 (2) 07:08 (2)	07:28 16:55		08:27 16:07	08:53 16:09
Potential sun hours	519	464	383	327	254	227	
Total, worst case			3	129	225		
Sun reduction			0,52	0,40	0,31		
Oper. time red.			1,00	1,00	1,00		
Wind dir. red.			0,98	1,00	0,93		
Total reduction			0,51	0,39	0,28		
Total, real			2	51	64		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (1) 07:00	05:48 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (1) 20:07	05:46 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (1) 06:55	05:44 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 06:52	05:42 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 20:13	05:40 21:11	04:54 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (1) 20:15	05:38 21:13	04:53 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	07:32 (1) 20:17	05:36 21:15	04:52 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:32 (1) 06:42	07:07 (2) 05:34	04:52 22:03
10	08:49 16:22	08:03 17:23	06:58 18:20	07:34 (1) 06:40	07:04 (2) 05:32	04:51 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	07:42 (1) 06:37	07:09 (2) 05:30	04:51 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:00 (2) 21:22	04:50 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	06:57 (2) 21:24	04:50 22:07
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	06:58 (2) 21:26	04:50 22:07
15	08:45 16:31	07:53 17:33	08:19 (6) 06:46	06:28 20:31	05:23 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	08:21 (6) 18:30	06:43 20:33	05:21 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	08:23 (6) 18:32	06:41 20:34	05:19 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	08:24 (6) 18:34	06:38 20:36	05:17 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	08:25 (6) 18:36	06:36 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	08:26 (6) 18:40	06:33 20:40	05:14 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	08:06 (6) 06:31	06:13 20:42	05:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	08:25 (6) 18:42	06:28 20:44	05:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	08:07 (6) 06:25	06:52 (5) 06:11	05:10 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	08:24 (6) 18:46	06:58 (5) 20:46	05:08 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	08:08 (6) 06:23	06:47 (5) 06:06	05:07 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	08:23 (6) 18:48	06:58 (5) 20:48	05:05 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	08:08 (6) 06:20	06:44 (5) 06:04	05:04 21:47	04:51 22:11
28	08:27 16:56	07:23 18:00	08:21 (6) 18:50	06:57 (5) 20:50	05:03 21:49	04:52 22:11
29	08:26 16:58	07:21 18:02	08:11 (6) 06:18	06:42 (5) 06:02	05:02 21:50	04:52 22:10
30	08:24 17:00	07:19 18:04	08:19 (6) 18:52	06:57 (5) 20:52	05:00 21:52	04:53 22:10
31	08:22 17:02	07:17 18:07	07:05 20:01	07:52 (5) 21:00	04:59 21:53	04:53 22:10
Potential sun hours	244	270	366	422	499	517
Total, worst case		152	197	41		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,91	0,99	0,98		
Total reduction		0,22	0,33	0,38		
Total, real		34	66	16		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December
1	04:54 22:10	05:36 21:32	06:33 20:23	07:01 (2) 19:07	07:29 16:53	08:27 16:06
2	04:54 22:09	05:37 21:30	06:35 20:20	07:03 (2) 19:04	07:31 16:51	08:29 16:05
3	04:55 22:09	05:39 21:29	06:36 20:18	07:05 (2) 19:01	07:32 16:49	08:30 16:05
4	04:56 22:08	05:41 21:27	06:38 20:15	07:07 (2) 18:59	19:01 16:47	08:32 16:04
5	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	10 08:21 (1) 08:09 (1)	16:45 16:38
6	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	13 08:22 (1) 08:08 (1)	16:45 16:43
7	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	15 08:23 (1) 08:10 (1)	16:41 16:41
8	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	13 08:23 (1) 08:12 (1)	16:39 16:39
9	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	11 08:23 (1) 08:14 (1)	16:37 16:37
10	05:02 22:04	05:52 21:14	06:49 20:00	07:46 18:44	8 08:22 (1) 08:16 (1)	16:35 16:35
11	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:41	5 08:21 (1) 08:18 (1)	16:34 16:34
12	05:05 22:02	05:55 21:10	06:53 19:55	07:50 18:39	1 08:19 (1) 07:54	16:32 16:32
13	05:06 22:01	05:57 21:08	06:55 19:53	07:35 (5) 07:43 (5)	07:52 18:37	08:44 16:30
14	05:07 22:00	05:59 21:06	06:57 19:50	07:32 (5) 07:44 (5)	07:54 18:34	08:45 16:28
15	05:08 21:59	06:01 21:03	06:59 19:47	07:31 (5) 07:45 (5)	07:56 18:32	08:46 16:27
16	05:10 21:58	06:03 21:01	07:01 19:45	07:30 (5) 07:46 (5)	07:58 18:29	08:00 16:25
17	05:11 21:56	06:05 20:59	07:02 19:42	07:30 (5) 07:46 (5)	08:00 18:27	08:02 16:23
18	05:13 21:55	06:07 20:57	07:04 19:40	07:32 (5) 07:46 (5)	08:02 18:25	08:04 16:22
19	05:14 21:54	06:08 20:54	07:06 19:37	07:33 (5) 07:44 (5)	08:04 18:22	08:06 16:20
20	05:16 21:52	06:10 20:52	07:08 19:35	07:35 (5) 07:43 (5)	08:06 18:20	08:08 16:19
21	05:17 21:51	06:12 20:50	07:10 19:32	07:37 (5) 07:42 (5)	08:08 18:18	08:10 16:18
22	05:19 21:49	06:14 20:47	07:12 19:30	07:39 (5) 07:40 (5)	08:10 18:15	08:12 16:16
23	05:20 21:48	06:16 20:45	07:14 19:27	07:40 (5) 18:13	17 08:56 (6) 08:41 (6)	16:16 16:13
24	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	14 08:55 (6) 08:43 (6)	16:15 16:14
25	05:24 21:45	06:20 20:40	07:17 19:22	07:16 17:08	11 08:54 (6) 07:45 (6)	16:14 16:12
26	05:25 21:43	06:22 20:38	07:19 19:19	07:18 17:06	8 07:53 (6) 07:47 (6)	16:12 16:11
27	05:27 21:41	06:23 20:35	07:21 19:17	07:20 17:04	5 07:52 (6) 07:49 (6)	16:11 16:10
28	05:29 21:40	06:25 20:33	07:23 19:14	07:22 17:02	1 07:50 (6) 16:10	16:05 16:05
29	05:30 21:38	06:27 20:30	06:59 (2) 07:07 (2)	07:25 19:12	07:24 17:00	08:24 16:08
30	05:32 21:36	06:29 20:28	06:58 (2) 07:08 (2)	07:27 19:09	07:26 16:57	08:53 16:07
31	05:34 21:34	06:31 20:25	06:59 (2) 07:08 (2)	07:28 16:55	07:28 16:55	08:53 16:09
Potential sun hours	519	464	383	327	254	227
Total, worst case		27		119		249
Sun reduction		0,52		0,40		0,31
Oper. time red.		1,00		1,00		1,00
Wind dir. red.		0,98		1,00		0,94
Total reduction		0,50		0,39		0,29
Total, real		14		47		71

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June		
1	08:53	08:20	07:20	07:59 (6)	07:03	07:33 (5)	05:51	04:58
	16:10	17:04	18:02	13 08:12 (6)	20:03	13 07:46 (5)	21:02	21:54
2	08:53	08:19	07:18	08:00 (6)	07:00	07:33 (5)	05:48	04:57
	16:11	17:06	18:04	9 08:09 (6)	20:05	11 07:44 (5)	21:03	21:56
3	08:52	08:17	07:16	06:57	06:57	07:36 (5)	05:46	04:56
	16:13	17:08	18:06	20:07	5 07:41 (5)	21:05	21:57	21:57
4	08:52	08:15	07:13	06:55	06:55	05:44	05:44	04:55
	16:14	17:10	18:08	20:09	21:07	21:58	21:58	21:58
5	08:52	08:13	07:11	06:52	06:52	05:42	05:42	04:55
	16:15	17:12	18:10	20:11	21:09	21:59	21:59	21:59
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40	04:54	04:54
	16:17	17:14	18:12	4 07:37 (1)	20:13	21:11	22:00	22:00
7	08:51	08:09	07:06	07:30 (1)	06:47	05:38	04:53	04:53
	16:18	17:16	18:14	7 07:37 (1)	20:15	21:13	22:01	22:01
8	08:50	08:07	07:03	07:28 (1)	06:45	05:36	04:52	04:52
	16:19	17:18	18:16	10 07:38 (1)	20:17	21:15	22:02	22:02
9	08:50	08:05	07:01	07:25 (1)	06:42	05:34	04:52	04:52
	16:21	17:21	18:18	13 07:38 (1)	20:19	21:17	22:03	22:03
10	08:49	08:03	06:58	07:23 (1)	06:40	05:32	04:51	04:51
	16:22	17:23	18:20	15 07:38 (1)	20:21	21:19	22:04	22:04
11	08:48	08:01	06:56	07:22 (1)	06:37	07:02 (2)	05:30	04:51
	16:24	17:25	18:22	15 07:37 (1)	20:23	1 07:03 (2)	21:20	22:05
12	08:47	07:59	06:53	07:23 (1)	06:35	07:00 (2)	05:28	04:50
	16:26	17:27	18:24	13 07:36 (1)	20:25	3 07:03 (2)	21:22	22:06
13	08:46	07:57	06:51	07:24 (1)	06:33	06:57 (2)	05:26	04:50
	16:27	17:29	18:26	10 07:34 (1)	20:27	5 07:02 (2)	21:24	22:07
14	08:46	07:55	06:48	07:27 (1)	06:30	06:55 (2)	05:24	04:50
	16:29	17:31	18:28	4 07:31 (1)	20:29	7 07:02 (2)	21:26	22:07
15	08:45	07:53	06:46	06:28	06:28	06:52 (2)	05:23	04:49
	16:31	17:33	18:30	20:31	9 07:01 (2)	21:28	22:08	22:08
16	08:44	07:50	06:43	06:25	06:25	06:51 (2)	05:21	04:49
	16:33	17:35	18:32	20:33	9 07:00 (2)	21:29	22:09	22:09
17	08:42	07:48	06:41	06:23	06:23	06:53 (2)	05:19	04:49
	16:34	17:37	18:34	20:34	5 06:58 (2)	21:31	22:09	22:09
18	08:41	07:46	06:38	06:20	06:20	05:17	04:49	04:49
	16:36	17:39	18:36	20:36	21:33	22:10	22:10	22:10
19	08:40	07:44	06:36	06:18	06:18	05:16	04:49	04:49
	16:38	17:42	18:38	20:38	21:35	22:10	22:10	22:10
20	08:39	07:41	08:08 (6)	06:33	06:16	05:14	04:49	04:49
	16:40	17:44	5 08:13 (6)	18:40	20:40	21:36	22:10	22:10
21	08:38	07:39	08:05 (6)	06:31	06:13	05:13	04:49	04:49
	16:42	17:46	8 08:13 (6)	18:42	20:42	21:38	22:11	22:11
22	08:36	07:37	08:03 (6)	06:28	06:11	05:11	04:49	04:49
	16:44	17:48	11 08:14 (6)	18:44	20:44	21:40	22:11	22:11
23	08:35	07:35	08:00 (6)	06:25	06:09	05:10	04:49	04:49
	16:46	17:50	14 08:14 (6)	18:46	20:46	21:41	22:11	22:11
24	08:33	07:32	07:58 (6)	06:23	06:06	05:08	04:50	04:50
	16:48	17:52	17 08:15 (6)	18:48	20:48	21:43	22:11	22:11
25	08:32	07:30	07:56 (6)	06:20	06:44 (5)	06:04	05:07	04:50
	16:50	17:54	18 08:14 (6)	18:50	2 06:46 (5)	20:50	21:44	22:11
26	08:30	07:28	07:56 (6)	06:18	06:42 (5)	06:02	05:05	04:51
	16:52	17:56	18 08:14 (6)	18:52	6 06:48 (5)	20:52	21:46	22:11
27	08:29	07:25	07:57 (6)	06:15	06:39 (5)	05:59	05:04	04:51
	16:54	17:58	17 08:14 (6)	18:54	9 06:48 (5)	20:54	21:47	22:11
28	08:27	07:23	07:57 (6)	06:13	06:37 (5)	05:57	05:03	04:52
	16:56	18:00	16 08:13 (6)	18:56	12 06:49 (5)	20:56	21:49	22:11
29	08:26		07:10	07:34 (5)	05:55	05:02	04:52	04:52
	16:58		19:58	14 07:48 (5)	20:58	21:50	22:10	22:10
30	08:24		07:08	07:32 (5)	05:53	05:00	04:53	04:53
	17:00		20:00	16 07:48 (5)	21:00	21:52	22:10	22:10
31	08:22		07:05	07:32 (5)		04:59		
	17:02		20:01	15 07:47 (5)		21:53		
Potential sun hours	244	270	366	422	499	517		
Total, worst case		124	187	68				
Sun reduction		0,24	0,34	0,39				
Oper. time red.		1,00	1,00	1,00				
Wind dir. red.		0,93	0,98	0,98				
Total reduction		0,23	0,33	0,39				
Total, real		28	62	26				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December	
1	04:54	05:36	06:33	07:29	08:02 (1)	07:30	08:27
	22:10	21:32	20:23	19:07	18:15 (1)	16:53	16:06
2	04:54	05:37	06:35	07:31	08:01 (1)	07:32	08:29
	22:09	21:30	20:20	19:04	18:15 (1)	16:51	16:05
3	04:55	05:39	06:36	07:32	08:00 (1)	07:34	08:30
	22:09	21:29	20:18	19:01	18:16 (1)	16:49	16:05
4	04:56	05:41	06:38	07:34	08:02 (1)	07:36	08:32
	22:08	21:27	20:15	18:59	18:16 (1)	16:47	16:04
5	04:57	05:43	06:40	07:36	08:04 (1)	07:38	08:33
	22:08	21:25	20:13	18:56	18:15 (1)	16:45	16:03
6	04:58	05:45	06:42	07:38	08:06 (1)	07:40	08:35
	22:07	21:23	20:10	18:54	18:15 (1)	16:43	16:03
7	04:59	05:46	06:44	07:40	08:08 (1)	07:42	08:36
	22:06	21:21	20:08	18:51	18:14 (1)	16:41	16:02
8	05:00	05:48	06:46	07:42	08:10 (1)	07:44	08:38
	22:06	21:18	20:05	18:49	18:12 (1)	16:39	16:02
9	05:01	05:50	06:48	07:30 (5)	07:44	07:46	08:39
	22:05	21:16	20:03	18:46	18:46	16:37	16:01
10	05:02	05:52	06:49	07:27 (5)	07:46	07:48	08:40
	22:04	21:14	20:00	18:44	18:44	16:35	16:01
11	05:03	05:54	06:51	07:25 (5)	07:48	08:36 (6)	08:41
	22:03	21:12	19:58	18:41	18:41	16:34	16:01
12	05:05	05:55	06:53	07:24 (5)	07:50	08:33 (6)	08:43
	22:02	21:10	19:55	18:39	18:39	16:32	16:00
13	05:06	05:57	06:55	07:23 (5)	07:52	08:31 (6)	08:44
	22:01	21:08	19:53	18:37	18:37	16:30	16:00
14	05:07	05:59	06:57	07:24 (5)	07:54	08:30 (6)	08:45
	22:00	21:06	19:50	18:34	18:34	16:28	16:00
15	05:09	06:01	06:59	07:26 (5)	07:56	08:29 (6)	08:46
	21:59	21:03	19:47	18:32	18:32	16:27	16:00
16	05:10	06:03	07:01	07:28 (5)	07:58	08:28 (6)	08:47
	21:58	21:01	19:45	18:29	18:29	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:28 (6)	08:47
	21:56	20:59	19:42	18:27	18:27	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:30 (6)	08:48
	21:55	20:57	19:40	18:25	18:25	16:22	16:00
19	05:14	06:08	07:06	07:35 (5)	08:04	08:32 (6)	08:49
	21:54	20:54	19:37	18:22	18:22	16:20	16:01
20	05:16	06:10	07:08	08:06	08:34 (6)	08:08	08:50
	21:52	20:52	19:35	18:20	18:20	16:19	16:01
21	05:17	06:12	07:10	08:08	08:36 (6)	08:10	08:50
	21:51	20:50	19:32	18:18	18:18	16:18	16:01
22	05:19	06:14	07:12	08:10	08:39 (6)	08:12	08:51
	21:49	20:47	19:30	18:15	18:15	16:16	16:02
23	05:20	06:16	07:14	08:12	08:42 (6)	08:13	08:51
	21:48	20:45	19:27	18:13	18:13	16:15	16:02
24	05:22	06:18	07:16	08:14	08:41	08:15	08:52
	21:46	20:42	19:24	18:11	18:11	16:14	16:03
25	05:24	06:20	07:17	08:16	08:40	08:17	08:52
	21:45	20:40	19:22	17:08	17:08	16:12	16:04
26	05:25	06:22	06:55 (2)	07:19	07:18	08:19	08:52
	21:43	20:38	19:19	17:06	17:06	16:11	16:04
27	05:27	06:23	06:53 (2)	07:21	07:20	08:21	08:53
	21:41	20:35	19:17	17:04	17:04	16:10	16:05
28	05:29	06:25	06:54 (2)	07:23	07:22	08:22	08:53
	21:40	20:33	19:14	17:02	17:02	16:09	16:06
29	05:30	06:27	06:56 (2)	07:25	07:24	08:24	08:53
	21:38	20:30	19:12	17:00	17:00	16:08	16:07
30	05:32	06:29	06:58 (2)	07:27	08:04 (1)	08:26	08:53
	21:36	20:28	19:09	16:57	16:57	16:07	16:08
31	05:34	06:31	06:59 (2)	07:28	08:13 (1)	08:28	08:53
	21:34	20:25	19:07	16:55	16:55	16:09	16:09
Potential sun hours	519	464	383	327	254	227	
Total, worst case			38	111	234		
Sun reduction			0,52	0,40	0,31		
Oper. time red.			1,00	1,00	1,00		
Wind dir. red.			0,97	1,00	0,95		
Total reduction			0,50	0,39	0,29		
Total, real			19	44	68		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: D - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Table with 12 columns (Jan-Dec) and 1 row of values: 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Main shadow calculation table with columns for months (January-December) and rows for each day of the year, including sunrise/sunset times and shadow reduction percentages.

Table layout: For each day in each month the following matrix apply

Matrix with 4 columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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+370 37 407548
Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:58 (6) 20:03	07:03 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	08:05 (1) 08:13 (1)	07:30 16:53
2	08:53 16:11	08:19 17:06	07:18 18:04	08:00 (6) 20:05	07:00 21:03	05:48 21:56	04:57 22:09	05:37 21:30	06:35 20:20	07:31 19:04	08:03 (1) 08:14 (1)	07:32 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	08:05 (6) 20:05	06:57 21:05	05:46 21:57	04:56 22:09	05:39 21:29	06:36 20:18	07:32 19:01	08:02 (1) 08:15 (1)	07:34 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	07:36 (1) 20:09	06:52 21:07	05:44 21:58	04:55 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (1) 08:15 (1)	07:36 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 20:11	06:52 21:09	05:42 21:59	04:55 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (1) 08:15 (1)	07:38 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 20:13	06:50 21:11	05:40 22:00	04:54 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:06 (1) 08:15 (1)	07:40 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 20:15	06:47 21:13	05:38 22:01	04:53 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:08 (1) 08:14 (1)	07:42 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 20:17	06:45 21:15	05:36 22:02	04:52 22:06	05:48 21:18	06:46 20:05	07:42 18:49	08:10 (1) 08:13 (1)	07:44 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 20:19	06:42 21:17	05:34 22:03	04:52 22:05	05:50 21:16	06:48 20:03	07:44 18:46	08:13 (1) 08:33 (6)	07:46 16:01
10	08:49 16:22	08:03 17:23	06:58 18:20	07:23 (1) 20:21	06:40 21:19	05:32 22:04	04:51 22:04	05:52 21:14	06:49 20:00	07:46 18:44	08:41 (6) 08:30 (6)	07:48 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	07:23 (1) 20:23	06:37 21:20	05:30 22:05	04:51 22:03	05:54 21:12	06:51 19:58	07:48 18:41	07:50 08:33 (6)	08:41 16:02
12	08:47 16:26	07:59 17:27	06:53 18:24	07:25 (1) 20:25	06:35 21:22	05:28 22:06	04:50 22:02	05:55 21:10	06:53 19:55	07:50 18:39	08:33 (6) 08:41 (6)	07:52 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	07:28 (1) 20:27	06:33 21:24	05:26 22:07	04:50 22:01	05:57 21:08	06:55 19:53	07:52 18:37	08:30 (6) 08:43 (6)	07:54 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	07:31 (1) 20:27	06:30 21:26	05:24 22:07	04:50 22:00	05:59 21:06	06:57 19:50	07:54 18:34	08:29 (6) 08:44 (6)	07:56 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	07:31 (1) 20:31	06:28 21:28	05:23 22:08	04:49 21:59	06:01 21:03	06:59 19:47	07:56 18:32	08:28 (6) 08:44 (6)	07:58 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	07:31 (1) 20:33	06:25 21:29	05:21 22:09	04:49 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:27 (6) 08:40 (6)	08:00 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	07:31 (1) 20:34	06:23 21:31	05:19 22:09	04:49 21:56	06:05 20:59	07:02 19:42	07:58 18:27	08:39 (6) 08:44 (6)	08:02 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	07:31 (1) 20:36	06:20 21:33	05:17 22:10	04:49 21:55	06:07 20:57	07:04 19:40	07:58 18:25	08:41 (6) 08:44 (6)	08:04 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	07:31 (1) 20:38	06:18 21:35	05:16 22:10	04:49 21:54	06:08 20:54	07:06 19:37	07:58 18:22	08:43 (6) 08:43 (6)	08:06 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	08:08 (6) 20:40	06:16 21:36	05:14 22:10	04:49 21:52	06:10 20:52	07:08 19:35	07:58 18:20	08:44 (6) 08:42 (6)	08:08 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	08:05 (6) 20:42	06:13 21:38	05:13 22:11	04:49 21:51	06:12 20:50	07:10 19:32	07:58 18:18	08:36 (6) 08:41 (6)	08:10 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	08:03 (6) 20:44	06:11 21:40	05:11 22:11	04:49 21:49	06:14 20:47	07:12 19:30	07:58 18:15	08:27 (6) 08:40 (6)	08:00 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	08:00 (6) 20:46	06:09 21:41	05:10 22:11	04:49 21:48	06:16 20:45	07:14 19:27	07:58 18:13	08:39 (6) 08:44 (6)	08:02 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	07:58 (6) 20:48	06:06 21:43	05:08 22:11	04:50 21:46	06:18 20:42	07:16 19:24	07:58 18:11	08:44 (6) 08:44 (6)	08:05 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	07:55 (6) 20:50	06:04 21:44	05:07 22:11	04:50 21:45	06:20 20:40	07:17 19:22	07:58 18:08	08:44 (6) 08:44 (6)	08:07 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	07:55 (6) 20:52	06:02 21:46	05:05 22:11	04:51 21:43	06:22 20:38	07:19 19:19	07:58 18:08	08:44 (6) 08:44 (6)	08:09 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	07:56 (6) 20:54	06:05 21:47	05:04 22:11	04:51 21:41	06:23 20:35	07:21 19:17	07:58 18:04	08:44 (6) 08:44 (6)	08:10 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	07:56 (6) 20:56	06:03 21:49	05:03 22:11	04:52 21:40	06:25 20:33	07:23 19:14	07:58 18:02	08:44 (6) 08:44 (6)	08:11 16:06
29	08:26 16:58	07:22 17:58	06:10 19:58	08:10 (6) 20:58	07:10 21:50	05:02 22:10	04:52 21:38	06:27 20:30	07:25 19:12	07:58 18:00	08:44 (6) 08:44 (6)	08:12 16:07
30	08:24 17:00	07:19 17:00	06:08 20:00	07:08 21:00	07:37 (5) 21:00	05:53 21:52	04:53 22:10	06:29 20:28	07:27 19:09	07:26 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02	07:15 17:02	06:05 20:01	07:05 21:01	07:38 (5) 21:01	04:59 21:53	05:34 21:34	06:31 20:25	07:27 16:55	07:28 16:55	08:22 16:09	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case		108	173						82	198		
Sun reduction		0,24	0,34						0,40	0,31		
Oper. time red.		1,00	1,00						1,00	1,00		
Wind dir. red.		0,94	0,98						1,00	0,95		
Total reduction		0,23	0,33						0,39	0,29		
Total, real		25	58						32	58		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	07:29 (5) 21:02	05:51 21:54	04:58 22:10	04:54 21:32	05:36 20:23	06:33 19:07	07:29 19:07	07:56 (1) 16:53	07:30 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	07:29 (5) 21:03	05:48 21:56	04:57 22:09	04:54 21:30	05:37 20:20	06:35 19:04	07:31 19:04	07:58 (1) 16:51	07:32 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:36 (6) 21:05	05:46 21:57	04:56 22:09	04:55 21:29	05:39 20:18	06:36 19:01	07:33 19:01	08:01 (1) 16:51	07:34 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	07:38 (6) 21:07	05:44 21:58	04:55 22:08	04:56 21:27	05:41 20:15	06:38 18:59	07:34 18:59	07:58 (1) 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	07:36 (6) 21:09	05:42 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	07:36 18:56	08:15 (6) 16:45	08:34 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	07:37 (6) 21:11	05:40 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	07:38 18:54	08:15 (6) 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	07:38 (6) 21:13	05:38 22:01	04:59 21:21	05:46 20:08	06:44 20:08	07:40 18:51	07:40 18:51	08:13 (6) 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	07:41 (6) 21:15	05:36 22:02	04:52 22:06	05:00 21:18	06:46 20:05	07:42 18:49	07:42 18:49	08:12 (6) 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	07:44 (6) 21:17	05:34 22:03	04:52 22:05	05:01 21:16	06:48 20:03	07:44 18:46	07:44 18:46	08:12 (6) 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	07:44 (6) 21:19	05:32 22:04	04:51 22:04	05:02 21:14	06:49 20:00	07:44 18:44	07:44 18:44	08:14 (6) 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:20 (1) 21:20	05:30 22:05	04:51 22:03	05:54 21:12	06:51 19:58	07:21 (5) 18:42	07:21 (5) 18:42	08:16 (6) 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:18 (1) 21:22	05:28 22:06	04:50 22:02	05:05 21:10	06:53 19:55	07:21 (5) 18:39	07:21 (5) 18:39	08:25 (6) 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	07:15 (1) 21:24	05:26 22:07	04:50 22:01	05:06 21:08	06:55 19:53	07:23 (5) 18:37	07:23 (5) 18:37	08:25 (6) 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	07:13 (1) 21:26	05:24 22:07	04:50 22:00	05:07 21:06	06:57 19:50	07:24 (5) 18:34	07:24 (5) 18:34	08:24 (6) 16:30	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	07:10 (1) 21:28	05:23 22:08	04:49 21:59	06:01 21:03	06:59 19:47	07:26 (5) 18:32	07:26 (5) 18:32	08:24 (6) 16:30	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	07:11 (1) 21:29	05:21 22:09	04:49 21:58	06:03 21:01	07:01 19:45	07:28 (5) 18:29	07:28 (5) 18:29	08:25 (6) 16:30	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	07:14 (1) 21:31	05:19 22:09	04:49 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:00 18:27	08:20 (6) 16:30	08:47 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	07:16 (1) 21:33	05:17 22:10	04:49 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:02 18:25	08:24 (6) 16:30	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	07:18 (1) 21:35	05:16 22:10	04:49 21:54	06:14 20:54	07:06 19:37	08:04 18:22	08:04 18:22	08:25 (6) 16:30	08:49 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	07:23 (1) 21:36	05:14 22:10	04:49 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:06 18:20	08:26 (6) 16:30	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	07:24 (1) 21:38	05:13 22:11	04:49 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:08 18:18	08:27 (6) 16:30	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	07:25 (1) 21:40	05:11 22:11	04:49 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:10 18:15	08:28 (6) 16:30	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	07:26 (1) 21:41	05:10 22:11	04:49 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:12 18:13	08:29 (6) 16:30	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	07:27 (1) 21:43	05:08 22:11	04:50 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:14 18:11	08:30 (6) 16:30	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	07:28 (1) 21:44	05:07 22:11	04:50 21:45	06:20 20:40	07:17 19:22	08:14 18:08	08:14 18:08	08:31 (6) 16:30	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	07:29 (1) 21:46	05:05 22:11	04:51 21:43	06:22 20:38	07:19 19:19	08:16 18:06	08:16 18:06	08:32 (6) 16:30	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	06:39 (5) 21:47	05:04 22:11	04:51 21:41	06:23 20:35	07:21 19:17	08:18 18:00	08:18 18:00	08:33 (6) 16:30	08:53 16:05
28	08:27 16:56	07:23 18:00	07:48 (6) 18:56	05:57 20:56	06:37 (5) 21:49	05:03 22:11	04:52 21:40	06:25 20:33	07:23 19:14	08:20 18:02	08:20 18:02	08:34 (6) 16:30	08:53 16:06
29	08:26 16:58	07:21 18:02	07:50 (6) 18:56	05:55 20:58	06:34 (5) 21:50	05:02 22:10	04:52 21:38	06:27 20:30	07:25 19:12	08:22 18:00	08:22 18:00	08:35 (6) 16:30	08:53 16:07
30	08:24 17:00	07:18 18:03	07:32 (5) 19:58	05:53 20:58	06:35 (5) 21:50	05:00 22:10	04:53 21:38	06:29 20:30	07:27 19:09	08:24 18:00	08:24 18:00	08:36 (6) 16:30	08:53 16:08
31	08:22 17:02	07:15 18:06	07:29 (5) 20:01	21:00 07:40 (5)	07:29 (5) 21:53	04:59 21:53	05:34 21:34	06:31 20:25	07:28 16:55	08:26 16:32	08:26 16:32	08:37 (6) 16:30	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227	
Total, worst case			153		17				86		88		
Sun reduction		0,24	0,34		0,39				0,40		0,31		
Oper. time red.		1,00	1,00		1,00				1,00		1,00		
Wind dir. red.		0,96	0,98		1,00				1,00		0,97		
Total reduction		0,24	0,33		0,39				0,39		0,30		
Total, real		0	51		7				34		26		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: G - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02									
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (6) 07:46 (6)	07:00 20:05	11	07:27 (5) 07:38 (5)	21:02 21:54	04:58 22:10	04:54 21:32	06:33 20:23	07:29 19:07
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (6) 07:47 (6)	06:57 20:07	8	07:35 (5) 21:03	21:56 21:57	04:56 22:09	04:55 21:30	05:39 20:20	06:36 19:04
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (6) 07:47 (6)	06:55 20:09			05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 07:47 (6)	06:52 20:11			05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (6) 07:46 (6)	06:50 20:13			05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10
7	08:51 16:18	08:09 17:16	07:06 18:14	07:33 (6) 07:45 (6)	06:47 20:15			05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08
8	08:50 16:19	08:07 17:18	07:03 18:16	07:34 (6) 07:43 (6)	06:45 20:17			05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05
9	08:50 16:21	08:05 17:21	07:01 18:18	07:35 (6) 07:40 (6)	06:42 20:19			05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	06:49 20:21			05:32 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	06:35 20:23			05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58
12	08:47 16:26	07:59 17:27	06:53 18:24	07:18 (1) 07:20 (1)	06:35 20:25			05:28 21:22	04:50 22:06	05:05 22:02	05:56 21:10	06:53 19:55
13	08:46 16:27	07:57 17:29	06:51 18:26	07:15 (1) 07:19 (1)	06:33 20:27			05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53
14	08:46 16:29	07:55 17:31	06:48 18:28	07:13 (1) 07:20 (1)	06:30 20:29			05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50
15	08:45 16:31	07:53 17:33	06:46 18:30	07:10 (1) 07:19 (1)	06:28 20:31			05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:47
16	08:44 16:33	07:50 17:35	06:43 18:32	07:08 (1) 07:18 (1)	06:25 20:33			05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45
17	08:42 16:34	07:48 17:37	06:41 18:34	07:08 (1) 07:16 (1)	06:23 20:34			05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	06:20 20:36			05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	06:18 20:38			05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	06:16 20:40			05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	06:13 20:42			05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	06:11 20:44			05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	06:09 20:46			05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	06:06 20:48			05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	06:04 20:50			05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	06:02 20:52			05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:59 20:54			05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17
28	08:27 16:56	07:23 18:00	06:13 18:56	06:37 (5) 06:39 (5)	05:57 20:56			05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14
29	08:26 16:58		07:10 19:58	07:34 (5) 07:39 (5)	05:55 20:58			05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12
30	08:24 17:00		07:08 20:00	07:32 (5) 07:39 (5)	05:53 21:00			05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09
31	08:22 17:02		07:05 20:01	07:29 (5) 07:38 (5)				04:59 21:53		05:34 21:34	06:31 20:25	
Potential sun hours	244	270	366	422	499	517	519	464	383		327	254
Total, worst case			131		19					81		71
Sun reduction			0,34		0,39					0,40		0,31
Oper. time red.			1,00		1,00					1,00		1,00
Wind dir. red.			0,98		1,00					1,00		0,97
Total reduction			0,33		0,39					0,39		0,30
Total, real			44		7					32		21

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June			
1	08:53	08:20	16:27 (1)	07:20	17:11 (5)	07:02	18:47 (2)	05:50	04:58
	16:10	17:04	4 16:31 (1)	18:02	21 17:32 (5)	20:03	35 19:22 (2)	21:01	21:54
2	08:53	08:19	16:26 (1)	07:18	17:12 (5)	07:00	18:46 (2)	05:48	04:57
	16:11	17:06	7 16:33 (6)	18:04	20 17:32 (5)	20:05	36 19:22 (2)	21:03	21:56
3	08:52	08:17	16:26 (1)	07:15	17:11 (5)	06:57	18:46 (2)	05:46	04:56
	16:13	17:08	9 16:35 (6)	18:06	20 17:31 (5)	20:07	36 19:22 (2)	21:05	21:57
4	08:52	08:15	16:25 (1)	07:13	17:12 (5)	06:55	18:46 (2)	05:44	04:55
	16:14	17:10	12 16:37 (6)	18:08	19 17:31 (5)	20:09	35 19:21 (2)	21:07	21:58
5	08:52	08:13	16:25 (1)	07:11	17:13 (5)	06:52	18:46 (2)	05:42	04:54
	16:15	17:12	15 16:40 (6)	18:10	16 17:29 (5)	20:11	35 19:21 (2)	21:09	21:59
6	08:51	08:11	16:25 (1)	07:08	17:14 (5)	06:50	18:46 (2)	05:40	04:54
	16:16	17:14	17 16:42 (6)	18:12	14 17:28 (5)	20:13	34 19:20 (2)	21:11	22:00
7	08:51	08:09	16:25 (1)	07:06	17:16 (5)	06:47	18:46 (2)	05:38	04:53
	16:18	17:16	20 16:45 (6)	18:14	9 17:25 (5)	20:15	33 19:19 (2)	21:13	22:01
8	08:50	08:07	16:26 (1)	07:03	17:17 (5)	06:45	18:46 (2)	05:36	04:52
	16:19	17:18	18 16:44 (6)	18:16	17:18 (5)	20:17	32 19:18 (2)	21:15	22:02
9	08:49	08:05	16:26 (1)	07:01	17:19 (5)	06:42	18:47 (2)	05:34	04:52
	16:21	17:20	18 16:44 (6)	18:18	17:20 (5)	20:19	30 19:17 (2)	21:17	22:03
10	08:49	08:03	16:26 (1)	06:58	17:21 (5)	06:40	18:48 (2)	05:32	04:51
	16:22	17:23	16 16:42 (1)	18:20	17:22 (5)	20:21	27 19:15 (2)	21:18	22:04
11	08:48	08:01	16:28 (1)	06:56	17:23 (5)	06:37	18:49 (2)	05:30	04:51
	16:24	17:25	14 16:42 (1)	18:22	17:24 (5)	20:23	25 19:14 (2)	21:20	22:05
12	08:47	07:59	16:29 (1)	06:53	17:25 (5)	06:35	18:50 (2)	05:28	04:50
	16:26	17:27	12 16:41 (1)	18:24	17:26 (5)	20:25	22 19:12 (2)	21:22	22:06
13	08:46	07:57	16:32 (1)	06:51	17:27 (5)	06:32	18:52 (2)	05:26	04:50
	16:27	17:29	6 16:38 (1)	18:26	17:28 (5)	20:27	18 19:10 (2)	21:24	22:07
14	08:45	07:55	16:33 (1)	06:48	17:29 (5)	06:30	18:56 (2)	05:24	04:49
	16:29	17:31	18 16:42 (1)	18:28	17:30 (5)	20:29	11 19:07 (2)	21:26	22:07
15	08:44	07:52	16:34 (1)	06:46	17:31 (5)	06:28	18:57 (2)	05:22	04:49
	16:31	17:33	17 16:43 (1)	18:30	17:32 (5)	20:30	10 19:08 (2)	21:28	22:08
16	08:43	07:50	16:35 (1)	06:43	17:33 (5)	06:25	18:58 (2)	05:21	04:49
	16:32	17:35	16 16:43 (1)	18:32	17:34 (5)	20:32	9 19:09 (2)	21:29	22:08
17	08:42	07:48	16:36 (1)	06:41	17:35 (5)	06:23	18:59 (2)	05:19	04:49
	16:34	17:37	15 16:44 (1)	18:34	17:36 (5)	20:34	8 19:10 (2)	21:31	22:09
18	08:41	07:46	16:37 (1)	06:38	17:37 (5)	06:20	19:01 (2)	05:17	04:49
	16:36	17:39	14 16:45 (1)	18:36	17:38 (5)	20:36	7 19:11 (2)	21:33	22:09
19	08:40	07:44	16:38 (1)	06:35	17:39 (5)	06:18	19:02 (2)	05:16	04:49
	16:38	17:41	13 16:46 (1)	18:38	17:40 (5)	20:38	6 19:12 (2)	21:34	22:10
20	08:39	07:41	16:39 (1)	06:33	17:41 (5)	06:15	19:03 (2)	05:14	04:49
	16:40	17:43	12 16:47 (1)	18:40	17:42 (5)	20:40	5 19:13 (2)	21:36	22:10
21	08:37	07:39	16:40 (1)	06:30	17:43 (5)	06:13	19:04 (2)	05:12	04:49
	16:42	17:46	11 16:48 (1)	18:42	17:44 (5)	20:42	4 19:14 (2)	21:38	22:10
22	08:36	07:37	16:41 (1)	06:28	17:45 (5)	06:11	19:05 (2)	05:11	04:49
	16:44	17:48	10 16:49 (1)	18:44	17:46 (5)	20:44	3 19:15 (2)	21:39	22:11
23	08:35	07:34	17:18 (5)	06:25	17:47 (5)	06:08	19:06 (2)	05:09	04:49
	16:45	17:50	9 17:19 (5)	18:46	17:48 (5)	20:46	2 19:16 (2)	21:41	22:11
24	08:33	07:32	17:16 (5)	06:23	17:49 (5)	06:06	19:07 (2)	05:08	04:50
	16:47	17:52	8 17:20 (5)	18:48	17:50 (5)	20:48	1 19:17 (2)	21:43	22:11
25	08:32	07:30	17:14 (5)	06:20	17:51 (5)	06:04	19:08 (2)	05:07	04:50
	16:49	17:54	7 17:21 (5)	18:50	17:52 (5)	20:50	0 19:18 (2)	21:44	22:11
26	08:30	07:27	17:13 (5)	06:18	17:53 (5)	06:02	19:09 (2)	05:05	04:50
	16:51	17:56	6 17:22 (5)	18:52	17:54 (5)	20:52	0 19:19 (2)	21:46	22:11
27	08:29	07:25	17:12 (5)	06:15	17:55 (5)	05:59	19:10 (2)	05:04	04:51
	16:53	17:58	5 17:23 (5)	18:54	17:56 (5)	20:54	0 19:20 (2)	21:47	22:11
28	08:27	07:23	17:12 (5)	06:13	17:57 (5)	05:57	19:11 (2)	05:03	04:51
	16:55	18:00	4 17:24 (5)	18:56	17:58 (5)	20:56	0 19:21 (2)	21:49	22:11
29	08:25	07:20	17:11 (5)	06:10	17:59 (5)	05:55	19:12 (2)	05:01	04:52
	16:57	18:02	3 17:25 (5)	19:57	18:00 (5)	20:58	0 19:22 (2)	21:50	22:10
30	08:24	07:17	17:10 (5)	07:07	18:01 (5)	05:53	19:13 (2)	05:00	04:53
	17:00	18:05	2 17:26 (5)	19:59	18:02 (5)	21:00	0 19:23 (2)	21:52	22:10
31	08:22	07:13	17:09 (5)	07:05	18:03 (5)	05:47	19:14 (2)	04:59	04:53
	17:02	18:07	1 17:27 (5)	20:01	18:04 (5)	21:02	0 19:24 (2)	21:53	22:10
Potential sun hours	244	270	366	422	499	517			
Total, worst case			241	354	409				
Sun reduction			0,24	0,34	0,39				
Oper. time red.			1,00	1,00	1,00				
Wind dir. red.			0,84	0,97	1,00				
Total reduction			0,20	0,33	0,39				
Total, real			49	116	159				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December					
1	04:53	05:35	06:33	18:48 (2)	07:29	07:30	15:56 (1)	08:27			
	22:10	21:32	20:23	19:13 (2)	19:06	16:53	16:12 (1)	16:06			
2	04:54	05:37	06:34	18:47 (2)	07:30	07:32	15:55 (1)	08:29			
	22:09	21:30	20:20	19:14 (2)	19:04	16:51	16:12 (6)	16:05			
3	04:55	05:39	06:36	18:44 (2)	07:32	07:34	15:55 (1)	08:30			
	22:09	21:28	20:18	19:14 (2)	19:01	16:49	16:14 (6)	16:04			
4	04:56	05:41	06:38	18:43 (2)	07:34	07:36	15:55 (1)	08:32			
	22:08	21:26	20:15	19:15 (2)	18:59	16:47	16:14 (6)	16:04			
5	04:57	05:43	06:40	18:42 (2)	07:36	07:38	15:55 (1)	08:33			
	22:08	21:24	20:13	19:15 (2)	18:56	16:45	16:12 (6)	16:03			
6	04:58	05:44	06:42	18:42 (2)	07:38	17:55 (5)	15:55 (1)	08:35			
	22:07	21:22	20:10	19:16 (2)	18:54	18:00 (5)	16:43	14	16:09 (6)	16:02	
7	04:59	05:46	06:44	18:41 (2)	07:40	17:52 (5)	15:56 (1)	08:36			
	22:06	21:20	20:08	19:16 (2)	18:51	11	18:03 (5)	16:41	12	16:08 (6)	16:02
8	05:00	05:48	06:46	18:40 (2)	07:42	17:49 (5)	15:56 (1)	08:38			
	22:06	21:18	20:05	19:15 (2)	18:49	15	18:04 (5)	16:39	10	16:06 (6)	16:01
9	05:01	05:50	06:47	18:40 (2)	07:44	17:47 (5)	15:57 (1)	08:39			
	22:05	21:16	20:03	19:15 (2)	18:46	17	18:04 (5)	16:37	6	16:03 (6)	16:01
10	05:02	05:52	06:49	18:39 (2)	07:46	17:47 (5)	15:58 (1)	08:40			
	22:04	21:14	20:00	19:15 (2)	18:44	19	18:06 (5)	16:35	3	16:01 (1)	16:01
11	05:03	05:54	06:51	18:39 (2)	07:48	17:46 (5)	07:50	08:41			
	22:03	21:12	19:58	19:15 (2)	18:41	20	18:06 (5)	16:33	16:00		
12	05:04	05:55	06:53	18:40 (2)	07:50	17:46 (5)	07:52	08:42			
	22:02	21:10	19:55	19:14 (2)	18:39	20	18:06 (5)	16:32	16:00		
13	05:06	05:57	06:55	18:39 (2)	07:52	17:45 (5)	07:54	08:44			
	22:01	21:08	19:52	19:12 (2)	18:36	21	18:06 (5)	16:30	16:00		
14	05:07	05:59	06:57	18:39 (2)	07:54	17:45 (5)	07:56	08:45			
	22:00	21:05	19:50	19:12 (2)	18:34	19	18:04 (5)	16:28	16:00		
15	05:08	06:01	06:59	18:40 (2)	07:56	17:45 (5)	07:58	08:46			
	21:59	21:03	19:47	19:11 (2)	18:32	16	18:01 (5)	16:27	16:00		
16	05:10	06:03	07:00	18:41 (2)	07:57	17:46 (5)	08:00	08:47			
	21:57	21:01	19:45	19:09 (2)	18:29	13	17:59 (5)	16:25	16:00		
17	05:11	06:05	07:02	18:42 (2)	07:59	17:46 (5)	08:02	08:47			
	21:56	20:59	19:42	19:08 (2)	18:27	10	17:56 (5)	16:23	16:00		
18	05:13	06:06	07:04	18:42 (2)	08:01	17:48 (5)	08:04	08:48			
	21:55	20:56	19:40	19:05 (2)	18:24	6	17:54 (5)	16:22	16:00		
19	05:14	06:08	07:06	18:44 (2)	08:03	17:50 (5)	08:06	08:49			
	21:54	20:54	19:37	19:03 (2)	18:22	1	17:51 (5)	16:20	16:01		
20	05:16	06:10	07:08	18:47 (2)	08:05	08:08	08:08	08:50			
	21:52	20:52	19:35	19:00 (2)	18:20	16:19	16:01	16:01			
21	05:17	06:12	07:10	08:07	08:07	08:10	08:10	08:50			
	21:51	20:49	19:32	18:17	18:17	16:17	16:01	16:01			
22	05:19	06:14	07:12	08:09	08:09	08:11	08:11	08:51			
	21:49	20:47	19:29	18:15	18:15	16:16	16:02	16:02			
23	05:20	06:16	07:14	08:11	08:11	08:13	08:13	08:51			
	21:48	20:45	19:27	18:13	18:13	16:15	16:02	16:02			
24	05:22	06:18	07:15	08:13	08:13	08:15	08:15	08:52			
	21:46	20:42	19:24	18:10	18:10	16:13	16:03	16:03			
25	05:23	06:20	07:17	07:15	07:15	08:17	08:17	08:52			
	21:45	20:40	19:22	17:08	17:08	16:12	16:03	16:03			
26	05:25	06:21	07:19	07:17	07:17	08:19	08:19	08:52			
	21:43	20:37	19:19	17:06	17:06	16:11	16:04	16:04			
27	05:27	06:23	07:21	07:19	07:19	08:20	08:20	08:53			
	21:41	20:35	19:17	17:04	17:04	16:10	16:05	16:05			
28	05:28	06:25	07:23	07:21	07:21	08:22	08:22	08:53			
	21:39	20:33	19:14	17:02	17:02	16:09	16:06	16:06			
29	05:30	06:27	18:56 (2)	07:25	07:24	16:01 (1)	08:24	08:53			
	21:38	20:30	12	19:08 (2)	19:11	16:59	8	16:09 (1)	16:08	16:07	
30	05:32	06:29	18:52 (2)	07:27	07:26	15:58 (1)	08:26	08:53			
	21:36	20:28	18	19:10 (2)	19:09	16:57	12	16:10 (1)	16:07	16:08	
31	05:34	06:31	18:50 (2)	07:28	07:28	15:57 (1)	08:26	08:53			
	21:34	20:25	22	19:12 (2)	19:11	16:55	14	16:11 (1)	16:09	16:09	
Potential sun hours	519	464	383	327	254	227					
Total, worst case		52	598	227	133						
Sun reduction		0,52	0,40	0,31	0,16						
Oper. time red.		1,00	1,00	1,00	1,00						
Wind dir. red.		1,00	1,00	0,91	0,81						
Total reduction		0,51	0,39	0,27	0,12						
Total, real		26	233	62	17						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: I - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, shadow times, and reduction factors. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53	08:27 16:06	
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	08:06 (6) 16:51	08:29 16:05	
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	08:03 (6) 16:49	08:34 16:05	
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 16:47	08:32 16:04	
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 07:37 (6)	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (6) 16:45	08:38 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (6) 07:37 (6)	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:06 (6) 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (6) 07:38 (6)	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:08 (6) 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (6) 07:37 (6)	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	08:10 (6) 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 07:36 (6)	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	07:24 (6) 07:35 (6)	06:40 20:21	05:32 21:19	04:51 22:04	05:02 22:02	05:52 21:14	06:50 20:00	07:46 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	07:25 (6) 07:33 (6)	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:42	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:56 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:43 16:00	
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00	
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00	
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27	08:46 16:00	
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25	08:47 16:00	
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:35	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:24	08:48 16:00	
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22	08:48 16:00	
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:06 16:20	08:49 16:01	
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01	
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18	08:50 16:01	
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16	08:51 16:02	
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:51 16:02	
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14	08:52 16:03	
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	07:16 17:08	08:17 16:12	08:52 16:04	
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:18 17:06	08:19 16:11	08:52 16:04	
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:20 17:04	08:21 16:10	08:53 16:05	
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	07:22 17:02	08:22 16:09	08:53 16:06	
29	08:26 16:58	07:10 19:58	07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	07:24 17:00	08:24 16:08	08:53 16:07	
30	08:24 17:00	07:08 20:00	07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	07:26 16:57	08:26 16:07	08:53 16:08	
31	08:22 17:02	07:05 20:01	07:05 20:01	04:59 21:53	04:59 21:53	05:34 21:34	05:34 20:25	06:31 20:25	07:28 16:55	07:28 16:55	08:27 16:09	08:53 16:09	
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227	
Total, worst case			51							53			
Sun reduction			0,34							0,31			
Oper. time red.			1,00							1,00			
Wind dir. red.			0,98							0,98			
Total reduction			0,33							0,30			
Total, real			17							16			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	08:01 (6) 08:08 (6)	07:30 16:53
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:59 (6) 08:09 (6)	07:32 16:51
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:37 20:18	07:33 19:01	08:00 (6) 08:10 (6)	07:34 16:49
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 08:10 (6)	07:36 16:47
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (6) 08:10 (6)	07:38 16:45
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:06 (6) 08:09 (6)	07:40 16:43
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (6) 07:33 (6)	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	07:42 16:41
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (6) 07:33 (6)	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	07:44 16:39
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 07:32 (6)	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37
10	08:49 16:23	08:03 17:23	06:58 18:20	07:23 (6) 07:32 (6)	06:40 20:21	05:32 21:19	04:51 22:04	05:02 22:02	05:52 21:14	06:50 20:00	07:46 18:44	07:48 16:35
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (6) 07:31 (6)	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:42	07:50 16:34
12	08:47 16:26	07:59 17:27	06:53 18:24	07:21 (6) 07:30 (6)	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:56 21:10	06:53 19:55	07:50 18:39	07:52 16:32
13	08:46 16:27	07:57 17:29	06:51 18:26	07:24 (6) 07:25 (6)	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:54 18:34	07:56 16:28
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:48	07:56 18:32	07:56 18:32	07:58 16:27
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	07:58 18:29	08:00 16:25
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:35	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:00 18:27	08:02 16:24
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:02 18:25	08:04 16:22
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:04 18:22	08:06 16:20
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:06 18:20	08:08 16:19
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:08 18:18	08:10 16:18
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:10 18:15	08:12 16:16
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:50 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:12 18:13	08:13 16:15
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:14 18:11	08:15 16:14
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	07:16 17:08	07:16 17:08	08:17 16:12
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:18 17:06	07:18 17:06	08:19 16:11
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:20 17:04	07:20 17:04	08:21 16:10
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	07:22 17:02	07:22 17:02	08:22 16:09
29	08:26 16:58	07:10 19:58	07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	07:24 17:00	07:24 17:00	08:24 16:08
30	08:24 17:00	07:08 20:00	07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	07:26 16:57	07:26 16:57	08:26 16:07
31	08:22 17:02	07:05 20:01	07:05 20:01	04:59 21:53	04:59 21:53	04:59 21:53	05:34 21:34	06:31 20:25	07:28 16:55	07:28 16:55	07:28 16:55	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327		254
Total, worst case					44						44	
Sun reduction					0,34						0,31	
Oper. time red.					1,00						1,00	
Wind dir. red.					0,98						0,98	
Total reduction					0,34						0,30	
Total, real					15						13	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:56 (6) 08:06 (6)	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:58 (6) 08:06 (6)	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:37 20:18	07:33 19:01	08:00 (6) 08:06 (6)	07:34 16:49	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 08:06 (6)	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (6) 08:05 (6)	07:38 16:45	08:34 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:05 (6)	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:04 (6)	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	08:04 (6)	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 06:42	05:34 20:19	04:52 21:17	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	08:04 (6)	07:46 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	07:23 (6) 06:40	05:32 20:21	04:51 21:19	05:02 22:04	05:52 21:14	06:50 20:00	07:46 18:44	08:04 (6)	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (6) 06:37	05:30 20:23	04:51 21:20	05:03 22:05	05:54 21:12	06:51 19:58	07:48 18:42	08:04 (6)	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	07:18 (6) 06:35	05:28 20:25	04:50 21:22	05:05 22:06	05:56 21:10	06:53 19:55	07:50 18:39	08:04 (6)	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	07:17 (6) 06:33	05:26 20:27	04:50 22:01	05:06 21:08	05:57 21:08	06:55 19:53	07:52 18:37	08:04 (6)	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	07:20 (6) 06:30	05:24 20:29	04:50 21:26	05:07 22:07	05:59 21:06	06:57 19:50	07:54 18:34	08:04 (6)	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	07:23 (6) 06:28	05:23 20:29	04:49 21:28	05:09 22:08	06:01 21:03	06:59 19:48	07:56 18:32	08:04 (6)	07:58 16:27	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:31	05:21 21:28	04:49 22:08	05:10 21:59	06:03 21:03	07:01 19:48	07:58 18:29	08:04 (6)	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:33	05:19 21:29	04:49 22:09	05:11 21:58	06:05 21:01	07:02 19:45	08:00 18:29	08:04 (6)	08:02 16:25	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:31	04:49 22:09	05:13 21:56	06:07 20:59	07:04 19:42	08:02 18:27	08:04 (6)	08:04 16:24	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:04 (6)	08:06 16:20	08:49 16:01
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:04 (6)	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:04 (6)	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:04 (6)	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:50 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:04 (6)	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:04 (6)	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:16 17:08	08:04 (6)	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	08:18 17:06	08:04 (6)	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:20 17:04	08:04 (6)	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	08:22 17:02	08:04 (6)	08:22 16:09	08:53 16:06
29	08:26 16:58	07:10 19:58	06:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	08:24 17:00	08:04 (6)	08:24 16:08	08:53 16:07
30	08:24 17:00	07:08 20:00	06:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	08:26 16:57	08:04 (6)	08:26 16:07	08:53 16:08
31	08:22 17:02	07:05 20:01	06:05 20:01	05:51 21:53	05:00 21:53	04:53 22:10	05:34 21:34	06:31 20:25	07:28 16:55	08:28 16:55	08:04 (6)	08:28 16:07	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227	
Total, worst case													
Sun reduction			0,36							0,40		0,31	
Oper. time red.			1,00							1,00		1,00	
Wind dir. red.			0,99							0,99		0,99	
Total reduction			0,34							0,39		0,30	
Total, real			12							3		9	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82Shadow receptor: M - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

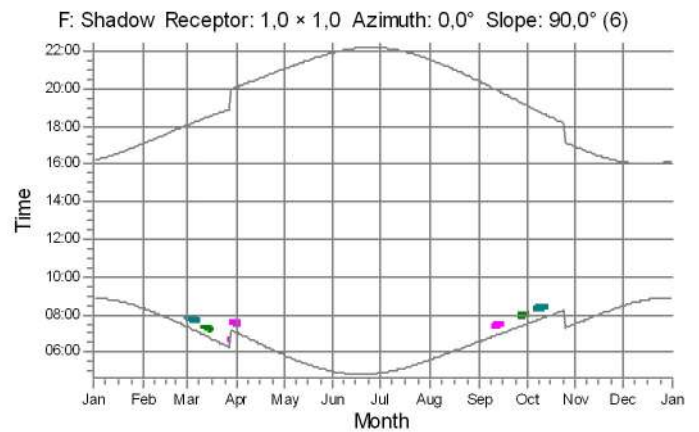
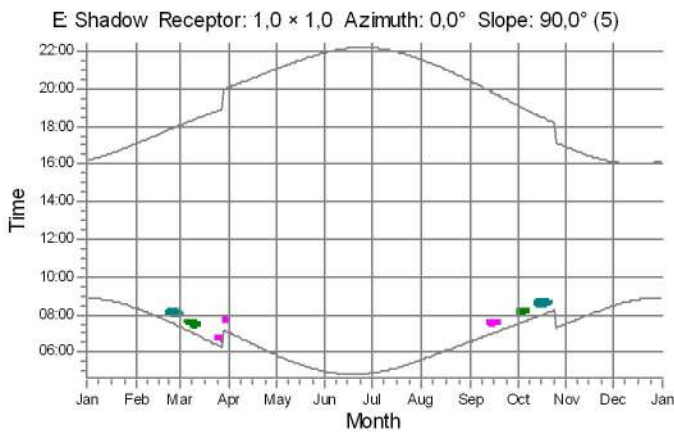
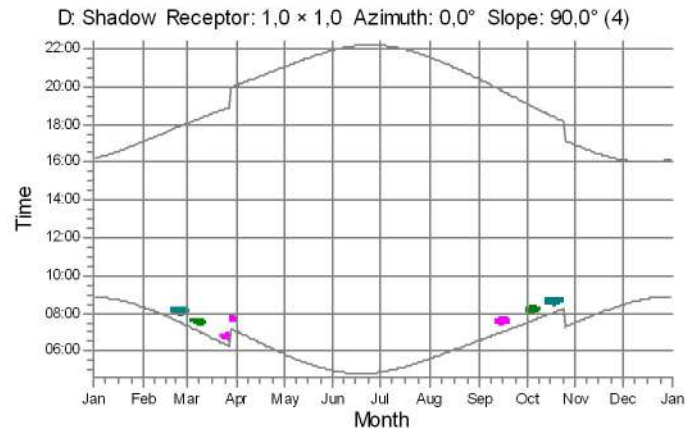
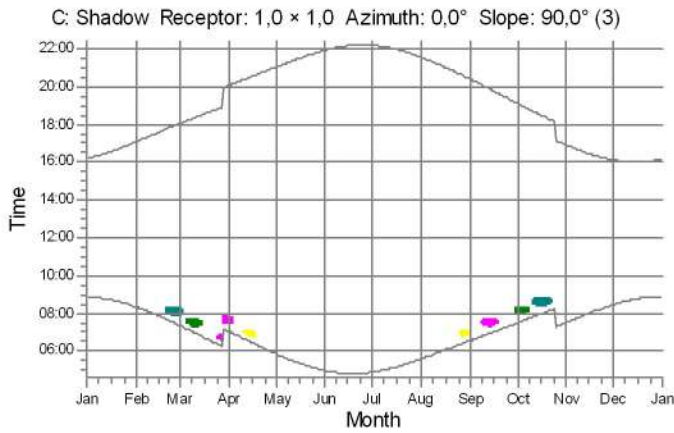
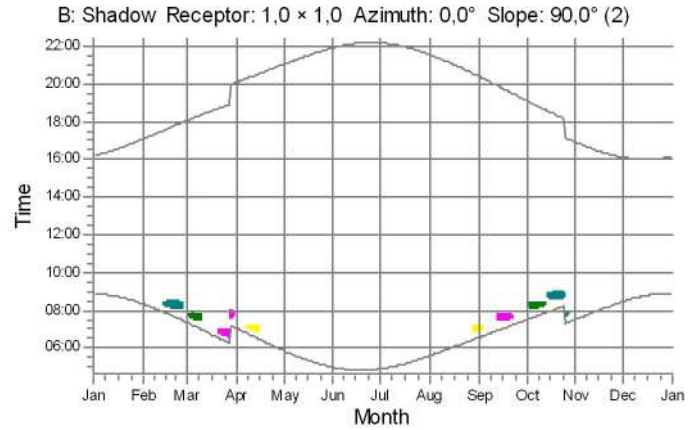
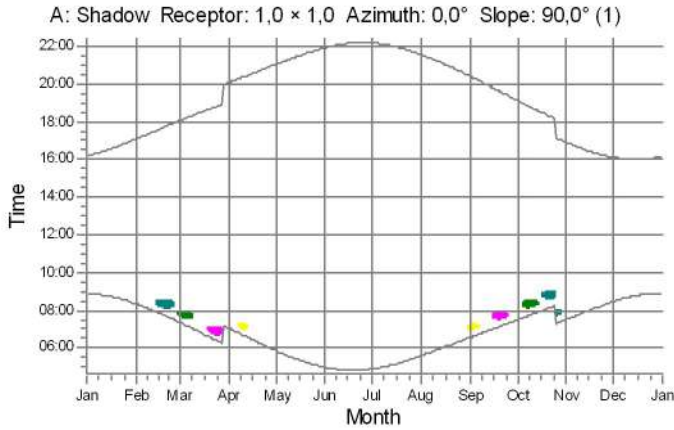
	January	February	March	April	May	June	July	August	September	October	November	December
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	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:55	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:24	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:02
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	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
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	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:01
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:55	06:53	07:50	07:52	08:42
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	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
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	16:33	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:01	08:04	08:48
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	16:38	17:41	18:38	20:38	21:34	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:13	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:18	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:39	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:15	08:17	08:52
	16:50	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:27	06:18	06:02	05:05	04:51	05:25	06:22	07:19	08:17	08:19	08:52
	16:52	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:20	08:53
	16:54	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	08:21	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:01	16:09	16:06
29	08:25		07:10	05:55	05:02	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E82

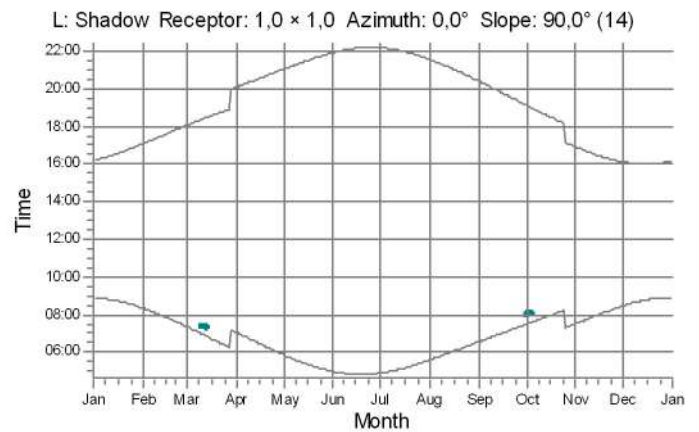
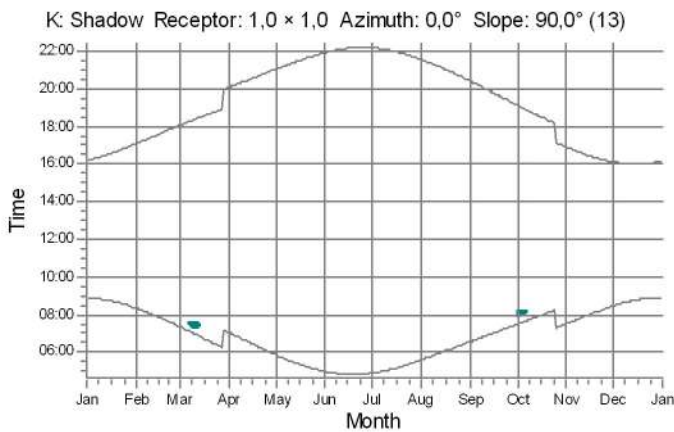
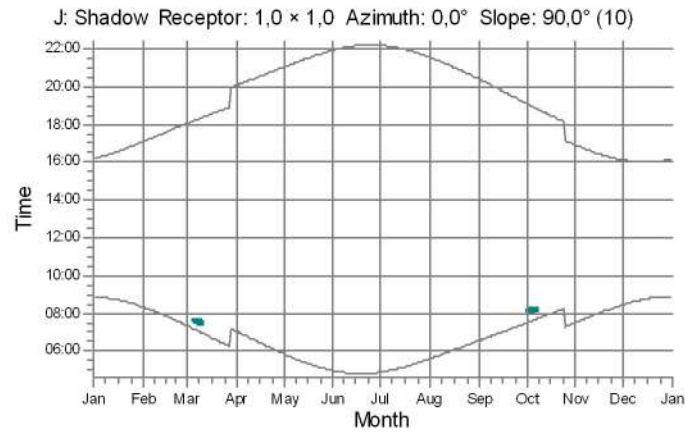
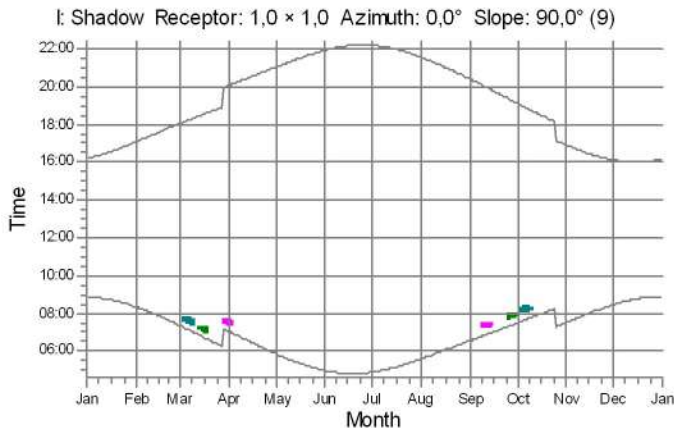
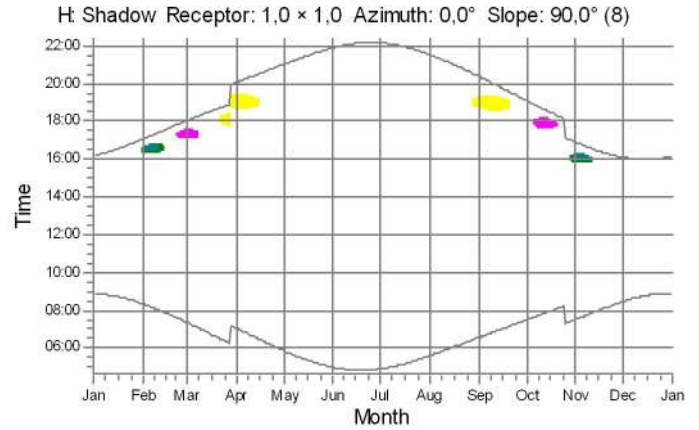
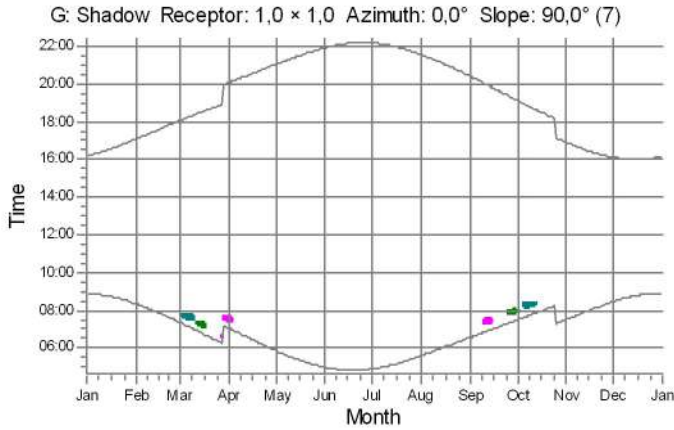


WTGs

- 1: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (1)
- 2: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (2)
- 5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E82



WTGs

- 1: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (1)
- 2: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (2)
- 5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas

K. Donelaicio str. 55-2

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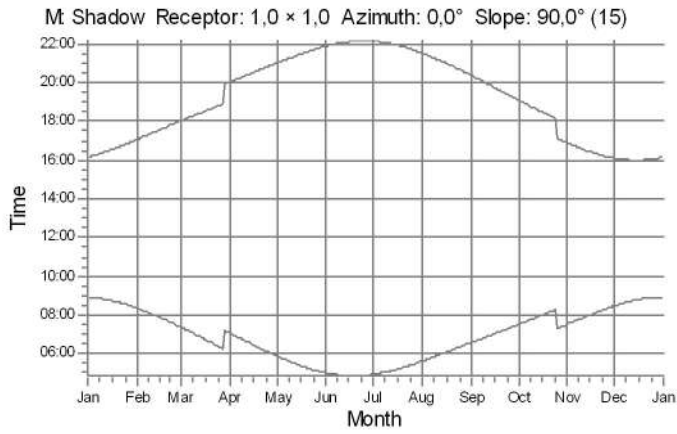
Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

2021.06.16 10:15/3.4.415

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E82



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
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+370 37 407548
Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E82WTG: 1 - ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (1)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 16:27-16:31/4 17:04	07:20 07:46-07:51/5 18:02	07:02 20:03	05:50 21:01	04:58 21:54	04:53 22:10	05:36 21:32	06:33 20:23	07:29 07:56-08:15/19 19:06	07:30 15:56-16:12/16 16:53	08:27 16:06
2	08:53 16:11	08:19 16:26-16:33/7 17:06	07:18 07:43-07:51/8 18:04	07:00 20:05	05:48 21:03	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 07:58-08:16/18 19:04	07:32 15:55-16:12/17 16:51	08:29 16:05
3	08:52 16:13	08:17 16:26-16:35/9 17:08	07:15 07:41-07:51/10 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:28	06:36 20:18	07:32 08:00-08:19/19 19:01	07:34 15:55-16:14/19 16:49	08:30 16:04
4	08:52 16:14	08:15 16:25-16:37/12 17:10	07:13 07:38-07:51/13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:26	06:38 20:15	07:34 08:02-08:21/19 18:59	07:36 15:55-16:14/19 16:47	08:32 16:04
5	08:52 16:15	08:13 16:25-16:40/15 17:12	07:11 07:36-07:51/15 18:10	06:52 20:11	05:42 21:09	04:54 21:59	04:57 22:08	05:43 21:24	06:40 20:13	07:36 08:04-08:22/18 18:56	07:38 15:55-16:12/17 16:45	08:33 16:03
6	08:51 16:17	08:11 16:25-16:42/17 17:14	07:08 07:33-07:50/17 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:44 21:22	06:42 20:10	07:38 08:06-08:24/18 18:54	07:40 15:55-16:09/14 16:43	08:35 16:03
7	08:51 16:18	08:09 16:25-16:44/19 17:16	07:06 07:30-07:48/18 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:20	06:44 20:08	07:40 08:08-08:25/17 18:51	07:42 15:56-16:08/12 16:41	08:36 16:02
8	08:50 16:19	08:07 16:26-16:44/18 17:18	07:03 07:28-07:46/18 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 08:10-08:26/16 18:49	07:44 15:56-16:06/10 16:39	08:38 16:02
9	08:49 16:21	08:05 16:26-16:44/18 17:20	07:01 07:25-07:44/19 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 08:12-08:26/14 18:46	07:46 15:57-16:03/6 16:37	08:39 16:01
10	08:49 16:22	08:03 16:26-16:42/16 17:23	06:58 07:23-07:42/19 18:20	06:40 20:21	05:32 21:18	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:46 08:14-08:26/12 18:44	07:48 15:58-16:01/3 16:35	08:40 16:01
11	08:48 16:24	08:01 16:28-16:42/14 17:25	06:56 07:20-07:37/17 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 08:16-08:25/9 18:41	07:50 15:56-16:08/12 16:34	08:41 16:00
12	08:47 16:26	07:59 16:29-16:41/12 17:27	06:53 07:18-07:36/18 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:55 21:10	06:53 19:55	07:50 08:18-08:25/7 18:39	07:52 15:56-16:08/12 16:32	08:42 16:00
13	08:46 16:27	07:57 16:32-16:38/6 17:29	06:51 07:15-07:22/7 18:26	06:32 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 08:20-08:23/3 18:37	07:54 15:56-16:08/12 16:30	08:44 16:00
14	08:45 16:29	07:55 16:32-16:41/11 17:31	06:48 07:13-07:22/9 18:28	06:30 20:29	05:24 21:26	04:49 22:07	05:07 22:00	05:59 21:05	06:57 19:50	07:54 15:56-16:08/12 18:34	07:56 15:56-16:08/12 16:28	08:45 16:00
15	08:44 16:31	07:53 16:32-16:41/11 17:33	06:46 07:10-07:21/11 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:08 21:59	06:01 21:03	06:59 19:47	07:56 15:56-16:08/12 18:32	07:58 15:56-16:08/12 16:27	08:46 16:00
16	08:43 16:32	07:50 16:32-16:41/11 17:35	06:43 07:08-07:20/12 18:32	06:25 20:32	05:21 21:29	04:49 22:08	05:10 21:57	06:03 21:01	07:01 19:45	07:58 15:56-16:08/12 18:29	08:00 15:56-16:08/12 16:25	08:47 16:00
17	08:42 16:34	07:48 16:32-16:41/11 17:37	06:41 07:05-07:16/11 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 15:56-16:08/12 18:27	08:02 15:56-16:08/12 16:23	08:47 16:00
18	08:41 16:36	07:46 16:32-16:41/11 17:39	06:38 07:05-07:12/7 18:36	06:20 20:36	05:17 21:33	04:49 22:09	05:13 21:55	06:07 20:56	07:04 19:40	08:01 15:56-16:08/12 18:24	08:04 15:56-16:08/12 16:22	08:48 16:00
19	08:40 16:38	07:44 16:32-16:41/11 17:41	06:36 07:05-07:12/7 18:38	06:18 20:38	05:16 21:34	04:49 22:10	05:14 21:54	06:08 20:54	07:06 19:37	08:03 15:56-16:08/12 18:22	08:06 15:56-16:08/12 16:20	08:49 16:01
20	08:39 16:40	07:41 16:32-16:41/11 17:44	06:33 07:05-07:12/7 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:05 15:56-16:08/12 18:20	08:08 15:56-16:08/12 16:19	08:50 16:01
21	08:37 16:42	07:39 16:32-16:41/11 17:46	06:30 07:05-07:12/7 18:42	06:13 20:42	05:13 21:38	04:49 22:10	05:17 21:51	06:12 20:49	07:10 19:32	08:07 15:56-16:08/12 18:17	08:10 15:56-16:08/12 16:18	08:50 16:01
22	08:36 16:44	07:37 16:32-16:41/11 17:48	06:28 07:05-07:12/7 18:44	06:11 20:44	05:11 21:39	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:29	08:09 15:56-16:08/12 18:15	08:11 15:56-16:08/12 16:16	08:51 16:02
23	08:35 16:46	07:35 16:32-16:41/11 17:50	06:25 07:05-07:12/7 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:11 15:56-16:08/12 18:13	08:13 15:56-16:08/12 16:15	08:51 16:02
24	08:33 16:48	07:32 16:32-16:41/11 17:52	06:23 07:05-07:12/7 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:15 19:24	08:13 15:56-16:08/12 18:11	08:15 15:56-16:08/12 16:14	08:52 16:03
25	08:32 16:49	07:30 16:32-16:41/11 17:54	06:20 07:05-07:12/7 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:14 15:56-16:08/12 17:08	08:17 15:56-16:08/12 16:12	08:52 16:04
26	08:30 16:51	07:27 16:32-16:41/11 17:56	06:18 07:05-07:12/7 18:52	06:02 20:52	05:05 21:46	04:50 22:11	05:25 21:43	06:21 20:38	07:19 19:19	08:15 15:56-16:08/12 17:06	08:19 15:56-16:08/12 16:11	08:52 16:04
27	08:29 16:53	07:25 16:32-16:41/11 17:58	06:15 07:05-07:12/7 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:16 15:56-16:08/12 17:04	08:20 15:56-16:08/12 16:10	08:53 16:05
28	08:27 16:56	07:23 07:48-07:49/1 18:00	06:13 07:05-07:12/7 18:56	06:13 20:56	05:03 21:49	04:52 22:11	05:29 21:39	06:25 20:33	07:23 19:14	08:17 15:56-16:08/12 17:02	08:22 15:56-16:08/12 16:09	08:53 16:06
29	08:25 16:58	07:21 07:48-07:49/1 17:58	06:11 07:05-07:12/7 19:02	06:11 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	08:18 15:56-16:08/12 17:02	08:24 15:56-16:08/12 16:08	08:53 16:07
30	08:24 17:00	07:19 07:48-07:49/1 17:59	06:09 07:05-07:12/7 19:08	06:09 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	08:19 15:56-16:08/12 17:02	08:26 15:56-16:08/12 16:07	08:53 16:08
31	08:22 17:02	07:05 07:48-07:49/1 17:59	06:07 07:05-07:12/7 20:01	06:07 21:00	04:59 21:53	04:59 22:10	05:34 21:34	06:31 20:25	07:28 19:09	08:19 15:56-16:08/12 17:02	08:28 15:56-16:08/12 16:07	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	168	248	0	0	0	0	0	66	223	133	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
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+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E82WTG: 2 - ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise and set times and minutes with flicker.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E82WTG: 3 - ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (7)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:22	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E82WTG: 4 - ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (8)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:30	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:02	16:09	16:06
29	08:25		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E82WTG: 5 - ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a matrix of sun rise/set times and operational status (0/1) for each hour of the day.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 10:15/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E82WTG: 6 - ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (e.g., 08:53 | 17:04) and a numerical value. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

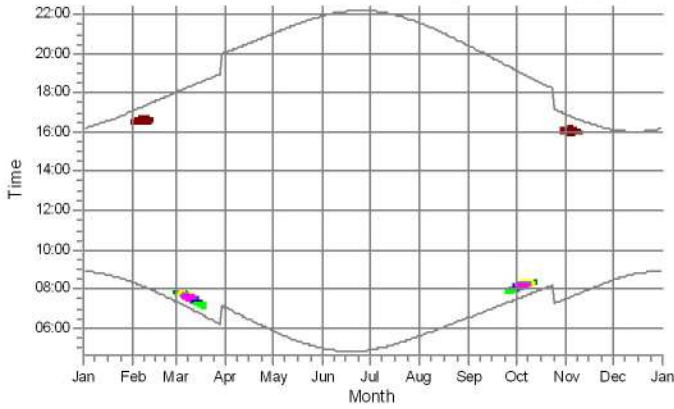
Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

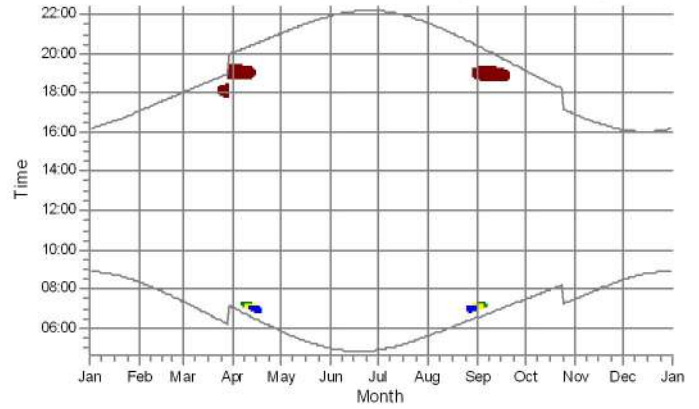
SHADOW - Calendar per WTG, graphical

Calculation: Planuojamos Enercon E82

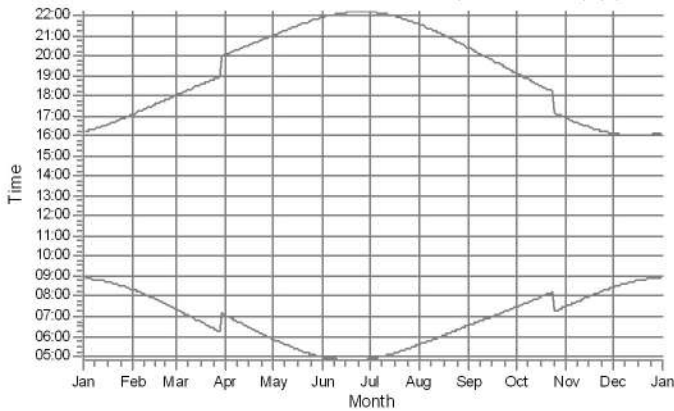
1: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (1)



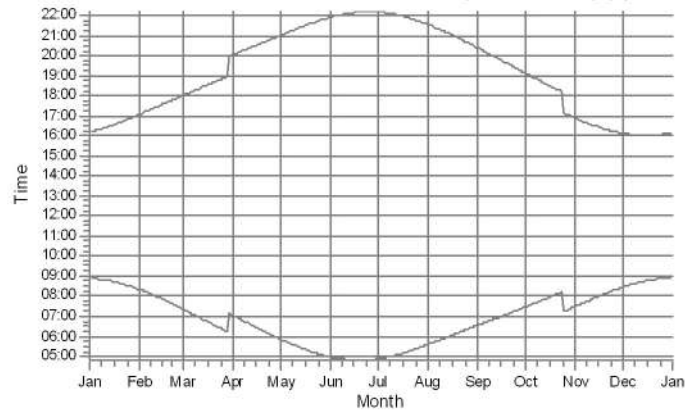
2: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (2)



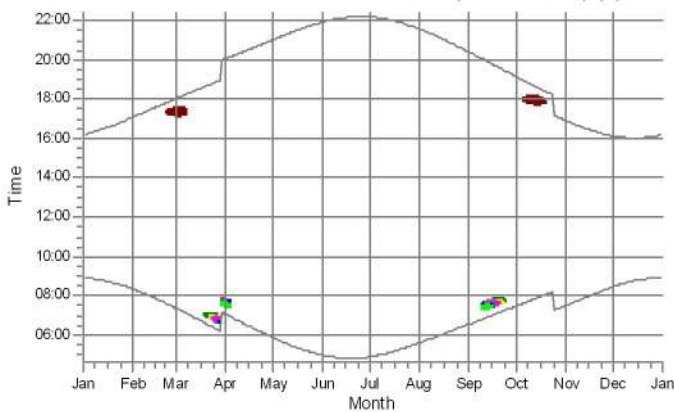
3: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)



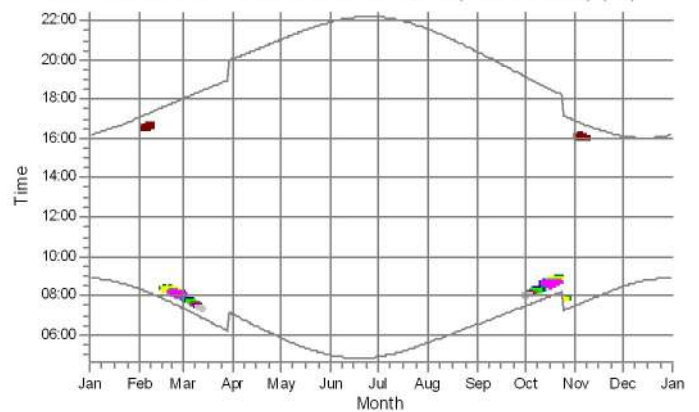
4: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)



5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)



6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)



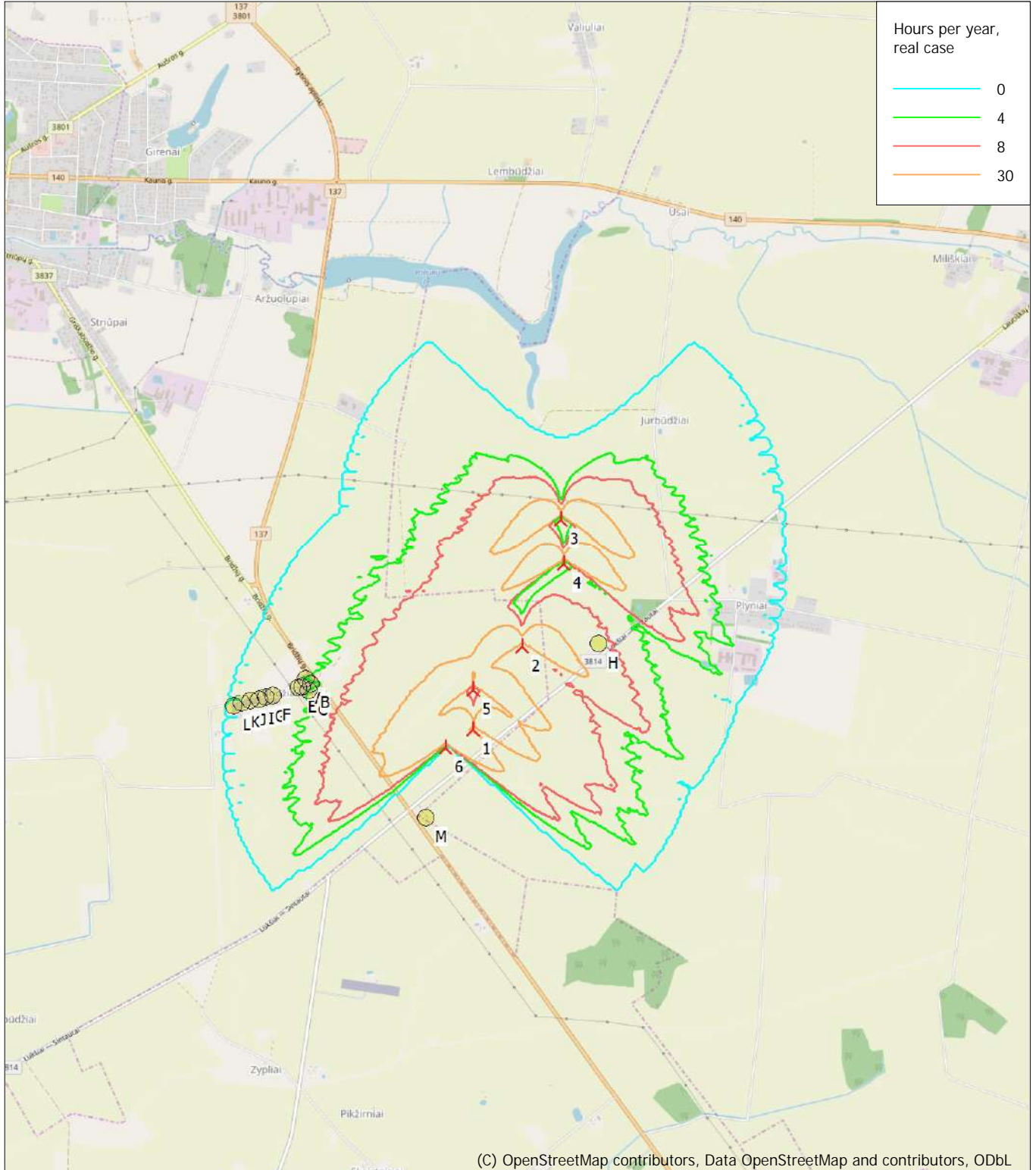
Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)

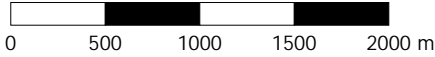
- G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

SHADOW - Map

Calculation: Planuojamos Enercon E82



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL



Map: EMD OpenStreetMap , Print scale 1:40.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 442.440 North: 6.088.240

New WTG Shadow receptor

Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

Project:

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 Calculated:
 2021.06.16 10:38/3.4.415

SHADOW - Main Result

Calculation: Planuojamos Enercon E82 Shut down
 Assumptions for shadow calculations

Maximum distance for influence
 Calculate only when more than 20 % of sun is covered by the blade
 Please look in WTG table

Minimum sun height over horizon for influence 3 °
 Day step for calculation 1 days
 Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

Flicker curtailment according to specified plan

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
 Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo
 Obstacles used in calculation
 Eye height for map: 1,5 m
 Grid resolution: 1,0 m

All coordinates are in
 Lithuanian TM LKS94-LKS94 (LT)
 WTGs



(C) OpenStreetMap-contributors, Data OpenStreetMap and contributors, ODbL

Scale 1:40.000
 New WTG Shadow receptor

Y	X	Z	Row data/Description	WTG type			Shadow data				
				Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Calculation distance [m]	RPM [RPM]
1	442.261	6.087.347	50,0 ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
2	442.609	6.087.922	50,0 ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
3	442.891	6.088.803	50,3 ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
4	442.908	6.088.497	50,0 ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
5	442.265	6.087.626	50,0 ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
6	442.058	6.087.221	50,0 ENERCON E-82 2000 82.0 !O! hub: 7...	No	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5

Shadow receptor-Input

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Project:

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Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Main Result

Calculation: Planuojamos Enercon E82 Shut down

Calculation Results

Shadow receptor

Shadow, expected values

No.	Shadow hours per year [h/year]	Avoided hours per year [h/year]
A*	3:25	0:13
B*	3:51	0:15
C*	3:52	0:14
D	3:05	
E	2:52	
F	1:58	
G	1:44	
H*	7:02	4:00
I	1:34	
J	0:32	
K	0:28	
L	0:23	
M	0:00	

* Receptors where shadow flicker is reduced by curtailment

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Stopped due to flicker curtailment [h/year]	Expected [h/year]
1	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (1)	13:58		3:43
2	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (2)	12:19	12:11	5:03
3	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)	0:00		0:00
4	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)	0:00		0:00
5	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)	14:21		4:46
6	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)	18:05		4:43

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

Project:

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Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: A - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and rows for each day of the month, showing sun rise/set times, shadow start/end times, and potential sun hours. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

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Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: B - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, shadow times, and reduction factors. Includes summary rows for 'Potential sun hours' and 'Sun reduction'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)



SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20	07:59 (6) 08:12 (6)	07:03 20:03	07:33 (5) 21:02
2	08:53 16:11	08:19 17:06	07:18	08:00 (6) 08:09 (6)	07:00 20:05	07:33 (5) 21:03
3	08:52 16:13	08:17 17:08	07:16	07:16 20:07	06:57 20:07	07:36 (5) 21:05
4	08:52 16:14	08:15 17:10	07:13	07:13 18:08	06:55 20:09	07:41 (5) 21:07
5	08:52 16:15	08:13 17:12	07:11	07:11 18:10	06:52 20:11	05:42 21:09
6	08:51 16:17	08:11 17:14	07:08	07:33 (1) 07:37 (1)	06:50 20:13	05:40 21:11
7	08:51 16:18	08:09 17:16	07:06	07:30 (1) 07:37 (1)	06:47 20:15	05:38 21:13
8	08:50 16:19	08:07 17:18	07:03	07:28 (1) 07:38 (1)	06:45 20:17	05:36 21:15
9	08:50 16:21	08:05 17:21	07:01	07:25 (1) 07:38 (1)	06:42 20:19	05:34 21:17
10	08:49 16:22	08:03 17:23	06:58	07:23 (1) 07:38 (1)	06:40 20:21	05:32 21:19
11	08:48 16:24	08:01 17:25	06:56	07:22 (1) 07:37 (1)	06:37 20:23	05:30 21:20
12	08:47 16:26	07:59 17:27	06:53	07:23 (1) 07:36 (1)	06:35 20:25	05:28 21:22
13	08:46 16:27	07:57 17:29	06:51	07:24 (1) 07:34 (1)	06:33 20:27	05:26 21:24
14	08:46 16:29	07:55 17:31	06:48	07:27 (1) 07:31 (1)	06:30 20:29	05:24 21:26
15	08:45 16:31	07:53 17:33	06:46	06:46 18:30	06:28 20:31	05:23 21:28
16	08:44 16:33	07:50 17:35	06:43	06:43 18:32	06:25 20:33	05:21 21:29
17	08:42 16:34	07:48 17:37	06:41	06:41 18:34	06:23 20:34	05:19 21:31
18	08:41 16:36	07:46 17:39	06:38	06:38 18:36	06:20 20:36	05:17 21:33
19	08:40 16:38	07:44 17:42	06:36	06:36 18:38	06:18 20:38	05:16 21:35
20	08:39 16:40	07:41 17:44	06:33 08:08 (6) 08:13 (6)	06:33 18:40	06:16 20:40	05:14 21:36
21	08:38 16:42	07:39 17:46	06:31 08:05 (6) 08:13 (6)	06:31 18:42	06:13 20:42	05:13 21:38
22	08:36 16:44	07:37 17:48	06:28 08:03 (6) 08:14 (6)	06:28 18:44	06:11 20:44	05:11 21:40
23	08:35 16:46	07:35 17:50	06:25 08:00 (6) 08:14 (6)	06:25 18:46	06:09 20:46	05:10 21:41
24	08:33 16:48	07:32 17:52	06:23 07:58 (6) 08:15 (6)	06:23 18:48	06:06 20:48	05:08 21:43
25	08:32 16:50	07:30 17:54	06:20 07:56 (6) 08:14 (6)	06:20 18:50	06:04 20:50	05:07 21:44
26	08:30 16:52	07:28 17:56	06:18 07:56 (6) 08:14 (6)	06:18 18:52	06:02 20:52	05:05 21:46
27	08:29 16:54	07:25 17:58	06:15 07:57 (6) 08:14 (6)	06:15 18:54	05:59 20:54	05:04 21:47
28	08:27 16:56	07:23 18:00	06:13 07:57 (6) 08:13 (6)	06:13 18:56	05:57 20:56	05:03 21:49
29	08:26 16:58	07:21 18:02	06:11 07:56 (6) 08:13 (6)	06:11 18:58	05:55 20:58	05:02 21:50
30	08:24 17:00	07:19 18:04	06:09 07:55 (6) 08:13 (6)	06:09 19:00	05:53 21:00	05:00 21:52
31	08:22 17:02	07:17 18:06	06:07 07:53 (6) 08:13 (6)	06:07 19:02	05:51 21:02	04:59 21:53
Potential sun hours	244	270	366	422	499	517
Total, worst case		124	187	29		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,93	0,98	1,00		
Total reduction		0,23	0,33	0,39		
Total, real		28	62	11		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:36	06:33	07:29	08:02 (1)	07:30	08:27	
	22:10	21:32	20:23	19:07	13 08:15 (1)	16:53	16:06	
2	04:54	05:37	06:35	07:31	08:01 (1)	07:32	08:29	
	22:09	21:30	20:20	19:04	14 08:15 (1)	16:51	16:05	
3	04:55	05:39	06:36	07:32	08:00 (1)	07:34	08:30	
	22:09	21:29	20:18	19:01	16 08:16 (1)	16:49	16:05	
4	04:56	05:41	06:38	07:34	08:02 (1)	07:36	08:32	
	22:08	21:27	20:15	18:59	14 08:16 (1)	16:47	16:04	
5	04:57	05:43	06:40	07:36	08:04 (1)	07:38	08:33	
	22:08	21:25	20:13	18:56	11 08:15 (1)	16:45	16:03	
6	04:58	05:45	06:42	07:38	08:06 (1)	07:40	08:35	
	22:07	21:23	20:10	18:54	9 08:15 (1)	16:43	16:03	
7	04:59	05:46	06:44	07:40	08:08 (1)	07:42	08:36	
	22:06	21:21	20:08	18:51	6 08:14 (1)	16:41	16:02	
8	05:00	05:48	06:46	07:42	08:10 (1)	07:44	08:38	
	22:06	21:18	20:05	18:49	2 08:12 (1)	16:39	16:02	
9	05:01	05:50	06:48	07:44		07:46	08:39	
	22:05	21:16	20:03	4 07:34 (5)	18:46	16:37	16:01	
10	05:02	05:52	06:49	07:46		07:48	08:40	
	22:04	21:14	20:00	10 07:37 (5)	18:44	16:35	16:01	
11	05:03	05:54	06:51	07:48		08:36 (6)	07:50	08:41
	22:03	21:12	19:58	13 07:38 (5)	18:41	5 08:41 (6)	16:34	16:01
12	05:05	05:55	06:53	07:50		08:33 (6)	07:52	08:43
	22:02	21:10	19:55	15 07:39 (5)	18:39	11 08:44 (6)	16:32	16:00
13	05:06	05:57	06:55	07:52		08:31 (6)	07:54	08:44
	22:01	21:08	19:53	16 07:39 (5)	18:37	14 08:45 (6)	16:30	16:00
14	05:07	05:59	06:57	07:54		08:30 (6)	07:56	08:45
	22:00	21:06	19:50	14 07:38 (5)	18:34	16 08:46 (6)	16:28	16:00
15	05:09	06:01	06:59	07:56		08:29 (6)	07:58	08:46
	21:59	21:03	19:47	12 07:38 (5)	18:32	17 08:46 (6)	16:27	16:00
16	05:10	06:03	07:01	07:58		08:28 (6)	08:00	08:47
	21:58	21:01	19:45	9 07:37 (5)	18:29	19 08:47 (6)	16:25	16:00
17	05:11	06:05	07:02	08:00		08:28 (6)	08:02	08:47
	21:56	20:59	19:42	6 07:36 (5)	18:27	18 08:46 (6)	16:23	16:00
18	05:13	06:07	07:04	08:02		08:30 (6)	08:04	08:48
	21:55	20:57	19:40	3 07:35 (5)	18:25	16 08:46 (6)	16:22	16:00
19	05:14	06:08	07:06	08:04		08:32 (6)	08:06	08:49
	21:54	20:54	19:37	13 18:22	08:45 (6)	16:20	16:01	
20	05:16	06:10	07:08	08:06		08:34 (6)	08:08	08:50
	21:52	20:52	19:35	10 18:20	08:44 (6)	16:19	16:01	
21	05:17	06:12	07:10	08:08		08:36 (6)	08:10	08:50
	21:51	20:50	19:32	7 18:18	08:43 (6)	16:18	16:01	
22	05:19	06:14	07:12	08:10		08:39 (6)	08:12	08:51
	21:49	20:47	19:30	3 18:15	08:42 (6)	16:16	16:02	
23	05:20	06:16	07:14	08:12			08:13	08:51
	21:48	20:45	19:27	13 18:13		16:15	16:02	
24	05:22	06:18	07:16	08:14			08:15	08:52
	21:46	20:42	19:24	10 18:11		16:14	16:03	
25	05:24	06:20	07:17	08:16			08:17	08:52
	21:45	20:40	19:22	7 17:08		16:12	16:04	
26	05:25	06:22	07:19	07:18			08:19	08:52
	21:43	20:38	5 07:00 (2)	19:19		17:06	16:11	16:04
27	05:27	06:23	06:53 (2)	07:21			08:21	08:53
	21:41	20:35	9 07:02 (2)	19:17		17:04	16:10	16:05
28	05:29	06:25	06:54 (2)	07:23			08:22	08:53
	21:40	20:33	9 07:03 (2)	19:14		17:02	16:09	16:06
29	05:30	06:27	06:56 (2)	07:25			08:24	08:53
	21:38	20:30	7 07:03 (2)	19:12		17:00	16:08	16:07
30	05:32	06:29	06:58 (2)	07:27		08:04 (1)	07:26	08:53
	21:36	20:28	5 07:03 (2)	19:09	9 08:13 (1)	16:57	16:07	16:08
31	05:34	06:31	06:59 (2)	07:28			08:26	08:53
	21:34	20:25	3 07:02 (2)	16:55			16:09	16:09
Potential sun hours	519	464	383	327		254	227	
Total, worst case			38	111	234			
Sun reduction			0,52	0,40	0,31			
Oper. time red.			1,00	1,00	1,00			
Wind dir. red.			0,97	1,00	0,95			
Total reduction			0,50	0,39	0,29			
Total, real			19	44	68			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: D - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for time slots (08:53 to 17:02). Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
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+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: E - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for time intervals (08:53 to 17:02). Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: F - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times and shadow calculations. Includes a summary row at the bottom for 'Potential sun hours' and 'Sun reduction'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker
First time (hh:mm) with flicker Last time (hh:mm) with flicker
(WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: G - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (7)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times and shadow reduction percentages. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June				
1	08:53	08:20	16:27 (1)	07:20	17:11 (5)	07:02	05:50	04:58		
	16:10	17:04	4	16:31 (1)	18:02	21	17:32 (5)	20:03	21:01	21:54
2	08:53	08:19	16:26 (1)	07:18	17:12 (5)	07:00	05:48	04:57		
	16:11	17:06	7	16:33 (6)	18:04	20	17:32 (5)	20:05	21:03	21:56
3	08:52	08:17	16:26 (1)	07:15	17:11 (5)	06:57	05:46	04:56		
	16:13	17:08	9	16:35 (6)	18:06	20	17:31 (5)	20:07	21:05	21:57
4	08:52	08:15	16:25 (1)	07:13	17:12 (5)	06:55	05:44	04:55		
	16:14	17:10	12	16:37 (6)	18:08	19	17:31 (5)	20:09	21:07	21:58
5	08:52	08:13	16:25 (1)	07:11	17:13 (5)	06:52	05:42	04:54		
	16:15	17:12	15	16:40 (6)	18:10	16	17:29 (5)	20:11	21:09	21:59
6	08:51	08:11	16:25 (1)	07:08	17:14 (5)	06:50	05:40	04:54		
	16:16	17:14	17	16:42 (6)	18:12	14	17:28 (5)	20:13	21:11	22:00
7	08:51	08:09	16:25 (1)	07:06	17:16 (5)	06:47	05:38	04:53		
	16:18	17:16	20	16:45 (6)	18:14	9	17:25 (5)	20:15	21:13	22:01
8	08:50	08:07	16:26 (1)	07:03	17:17 (5)	06:45	05:36	04:52		
	16:19	17:18	18	16:44 (6)	18:16	20	17:27 (5)	20:17	21:15	22:02
9	08:49	08:05	16:26 (1)	07:01	17:18 (5)	06:42	05:34	04:52		
	16:21	17:20	18	16:44 (6)	18:18	20	17:27 (5)	20:19	21:17	22:03
10	08:49	08:03	16:26 (1)	06:58	17:19 (5)	06:40	05:32	04:51		
	16:22	17:23	16	16:42 (1)	18:20	20	17:27 (5)	20:21	21:18	22:04
11	08:48	08:01	16:28 (1)	06:56	17:20 (5)	06:37	05:30	04:51		
	16:24	17:25	14	16:42 (1)	18:22	20	17:26 (5)	20:23	21:20	22:05
12	08:47	07:59	16:29 (1)	06:53	17:21 (5)	06:35	05:28	04:50		
	16:26	17:27	12	16:41 (1)	18:24	20	17:25 (5)	20:25	21:22	22:06
13	08:46	07:57	16:32 (1)	06:51	17:22 (5)	06:32	05:26	04:50		
	16:27	17:29	6	16:38 (1)	18:26	20	17:24 (5)	20:27	21:24	22:07
14	08:45	07:55	06:48	06:48	17:23 (5)	06:30	05:24	04:49		
	16:29	17:31	18:28	18:28	20	17:23 (5)	20:29	21:26	22:07	
15	08:44	07:52	06:46	06:46	17:24 (5)	06:28	05:22	04:49		
	16:31	17:33	18:30	18:30	20	17:22 (5)	20:30	21:28	22:08	
16	08:43	07:50	06:43	06:43	17:25 (5)	06:25	05:21	04:49		
	16:32	17:35	18:32	18:32	20	17:24 (5)	20:32	21:29	22:08	
17	08:42	07:48	06:41	06:41	17:26 (5)	06:23	05:19	04:49		
	16:34	17:37	18:34	18:34	20	17:23 (5)	20:34	21:31	22:09	
18	08:41	07:46	06:38	06:38	17:27 (5)	06:20	05:17	04:49		
	16:36	17:39	18:36	18:36	20	17:22 (5)	20:36	21:33	22:09	
19	08:40	07:44	06:35	06:35	17:28 (5)	06:18	05:16	04:49		
	16:38	17:41	18:38	18:38	20	17:21 (5)	20:38	21:34	22:10	
20	08:39	07:41	06:33	06:33	17:29 (5)	06:15	05:14	04:49		
	16:40	17:43	18:40	18:40	20	17:20 (5)	20:40	21:36	22:10	
21	08:37	07:39	06:30	06:30	17:30 (5)	06:13	05:12	04:49		
	16:42	17:46	18:42	18:42	20	17:19 (5)	20:42	21:38	22:10	
22	08:36	07:37	06:28	06:28	17:31 (5)	06:11	05:11	04:49		
	16:44	17:48	18:44	18:44	20	17:18 (5)	20:44	21:39	22:11	
23	08:35	07:34	17:18 (5)	06:25	17:32 (5)	06:08	05:09	04:49		
	16:45	17:50	3	17:21 (5)	18:46	20	17:17 (5)	20:46	21:41	22:11
24	08:33	07:32	17:16 (5)	06:23	17:33 (5)	06:06	05:08	04:50		
	16:47	17:52	7	17:23 (5)	18:48	20	17:16 (5)	20:48	21:43	22:11
25	08:32	07:30	17:14 (5)	06:20	17:34 (5)	06:04	05:07	04:50		
	16:49	17:54	11	17:25 (5)	18:50	20	17:15 (5)	20:50	21:44	22:11
26	08:30	07:27	17:13 (5)	06:18	17:35 (5)	06:02	05:05	04:50		
	16:51	17:56	15	17:28 (5)	18:52	20	17:14 (5)	20:52	21:46	22:11
27	08:29	07:25	17:12 (5)	06:15	17:36 (5)	05:59	05:04	04:51		
	16:53	17:58	17	17:29 (5)	18:54	20	17:13 (5)	20:54	21:47	22:11
28	08:27	07:23	17:12 (5)	06:13	17:37 (5)	05:57	05:03	04:51		
	16:55	18:00	20	17:32 (5)	18:56	20	17:12 (5)	20:56	21:49	22:11
29	08:25	07:20	07:10	07:10	17:38 (5)	05:55	05:01	04:52		
	16:57	18:04	19:57	19:57	20	17:11 (5)	20:58	21:50	22:10	
30	08:24	07:18	07:07	07:07	17:39 (5)	05:53	05:00	04:53		
	17:00	18:07	19:59	19:59	20	17:10 (5)	21:00	21:52	22:10	
31	08:22	07:14	07:05	07:05	17:40 (5)	05:51	04:59	04:59		
	17:02	18:09	20:01	20:01	20	17:09 (5)	21:53	21:53		
Potential sun hours	244	270	366	422	499	517				
Total, worst case		241	119							
Sun reduction		0,24	0,34							
Oper. time red.		1,00	1,00							
Wind dir. red.		0,84	0,93							
Total reduction		0,20	0,31							
Total, real		49	37							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December			
1	04:53	05:35	06:33	18:48 (2)	07:29	07:30	15:56 (1)	08:27	
	22:10	21:32	20:23	19:13 (2)	19:06	16:53	16:12 (1)	16:06	
2	04:54	05:37	06:34	18:47 (2)	07:30	07:32	15:55 (1)	08:29	
	22:09	21:30	20:20	19:14 (2)	19:04	16:51	16:12 (6)	16:05	
3	04:55	05:39	06:36	18:44 (2)	07:32	07:34	15:55 (1)	08:30	
	22:09	21:28	20:18	19:14 (2)	19:01	16:49	16:14 (6)	16:04	
4	04:56	05:41	06:38	18:43 (2)	07:34	07:36	15:55 (1)	08:32	
	22:08	21:26	20:15	19:15 (2)	18:59	16:47	16:14 (6)	16:04	
5	04:57	05:43	06:40	18:42 (2)	07:36	07:38	15:55 (1)	08:33	
	22:08	21:24	20:13	19:15 (2)	18:56	16:45	16:12 (6)	16:03	
6	04:58	05:44	06:42	18:42 (2)	07:38	17:55 (5)	15:55 (1)	08:35	
	22:07	21:22	20:10	19:16 (2)	18:54	5 18:00 (5)	16:43	14 16:09 (6)	16:02
7	04:59	05:46	06:44	18:41 (2)	07:40	17:52 (5)	15:56 (1)	08:36	
	22:06	21:20	20:08	19:16 (2)	18:51	11 18:03 (5)	16:41	12 16:08 (6)	16:02
8	05:00	05:48	06:46	18:40 (2)	07:42	17:49 (5)	15:56 (1)	08:38	
	22:06	21:18	20:05	19:15 (2)	18:49	15 18:04 (5)	16:39	10 16:06 (6)	16:01
9	05:01	05:50	06:47	18:40 (2)	07:44	17:47 (5)	15:57 (1)	08:39	
	22:05	21:16	20:03	19:15 (2)	18:46	17 18:04 (5)	16:37	6 16:03 (6)	16:01
10	05:02	05:52	06:49	18:39 (2)	07:46	17:47 (5)	15:58 (1)	08:40	
	22:04	21:14	20:00	19:15 (2)	18:44	19 18:06 (5)	16:35	3 16:01 (1)	16:01
11	05:03	05:54	06:51	18:39 (2)	07:48	17:46 (5)	16:01 (1)	08:41	
	22:03	21:12	19:58	19:15 (2)	18:41	20 18:06 (5)	16:33	16:00	
12	05:04	05:55	06:53	18:40 (2)	07:50	17:46 (5)	16:32	08:42	
	22:02	21:10	19:55	19:14 (2)	18:39	20 18:06 (5)	16:32	16:00	
13	05:06	05:57	06:55	18:39 (2)	07:52	17:45 (5)	16:32	08:44	
	22:01	21:08	19:52	19:12 (2)	18:36	21 18:06 (5)	16:30	16:00	
14	05:07	05:59	06:57	18:39 (2)	07:54	17:45 (5)	16:30	08:45	
	22:00	21:05	19:50	19:12 (2)	18:34	19 18:04 (5)	16:28	16:00	
15	05:08	06:01	06:59	18:40 (2)	07:56	17:45 (5)	16:28	08:46	
	21:59	21:03	19:47	19:11 (2)	18:32	16 18:01 (5)	16:27	16:00	
16	05:10	06:03	07:00	18:41 (2)	07:57	17:46 (5)	16:27	08:47	
	21:57	21:01	19:45	19:09 (2)	18:29	13 17:59 (5)	16:25	16:00	
17	05:11	06:05	07:02	18:42 (2)	07:59	17:46 (5)	16:25	08:47	
	21:56	20:59	19:42	19:08 (2)	18:27	10 17:56 (5)	16:23	16:00	
18	05:13	06:06	07:04	18:42 (2)	08:01	17:48 (5)	16:23	08:48	
	21:55	20:56	19:40	19:05 (2)	18:24	6 17:54 (5)	16:22	16:00	
19	05:14	06:08	07:06	18:44 (2)	08:03	17:50 (5)	16:22	08:49	
	21:54	20:54	19:37	19:03 (2)	18:22	1 17:51 (5)	16:20	16:01	
20	05:16	06:10	07:08	18:47 (2)	08:05	08:08	16:20	08:50	
	21:52	20:52	19:35	13 19:00 (2)	18:20	16:19	16:20	16:01	
21	05:17	06:12	07:10	08:07	08:10	08:10	16:19	08:50	
	21:51	20:49	19:32	18:17	16:17	16:17	16:17	16:01	
22	05:19	06:14	07:12	08:09	08:11	08:11	16:16	08:51	
	21:49	20:47	19:29	18:15	16:16	16:16	16:16	16:02	
23	05:20	06:16	07:14	08:11	08:13	08:13	16:15	08:51	
	21:48	20:45	19:27	18:13	16:15	16:15	16:15	16:02	
24	05:22	06:18	07:15	08:13	08:15	08:15	16:14	08:52	
	21:46	20:42	19:24	18:10	16:13	16:13	16:13	16:03	
25	05:23	06:20	07:17	07:15	08:17	08:17	16:12	08:52	
	21:45	20:40	19:22	17:08	16:12	16:12	16:12	16:03	
26	05:25	06:21	07:19	07:17	08:19	08:19	16:11	08:52	
	21:43	20:37	19:19	17:06	16:11	16:11	16:11	16:04	
27	05:27	06:23	07:21	07:19	08:20	08:20	16:10	08:53	
	21:41	20:35	19:17	17:04	16:10	16:10	16:10	16:05	
28	05:28	06:25	07:23	07:21	08:22	08:22	16:09	08:53	
	21:39	20:33	19:14	17:02	16:09	16:09	16:09	16:06	
29	05:30	06:27	18:56 (2)	07:25	07:24	16:01 (1)	16:08	08:53	
	21:38	20:30	12 19:08 (2)	19:11	16:59	8 16:09 (1)	16:08	16:07	
30	05:32	06:29	18:52 (2)	07:27	07:26	15:58 (1)	16:07	08:53	
	21:36	20:28	18 19:10 (2)	19:09	16:57	12 16:10 (1)	16:07	16:08	
31	05:34	06:31	18:50 (2)	07:28	07:28	15:57 (1)	16:07	08:53	
	21:34	20:25	22 19:12 (2)	19:12	16:55	14 16:11 (1)	16:07	16:09	
Potential sun hours	519	464	383	327	254	227			
Total, worst case		52	598	227	133				
Sun reduction		0,52	0,40	0,31	0,16				
Oper. time red.		1,00	1,00	1,00	1,00				
Wind dir. red.		1,00	1,00	0,91	0,81				
Total reduction		0,51	0,39	0,27	0,12				
Total, real		26	232	62	17				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: I - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	07:27 (5) 07:36 (5)	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	08:27 16:53
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	07:25 (5) 07:34 (5)	05:48 21:03	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	16:06 16:51
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:28 (5) 07:36 (6)	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	08:31 16:49
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	07:33 (6) 07:42 (6)	05:55 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:32 16:47
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	07:36 (6) 07:43 (6)	05:52 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:34 16:45
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	07:33 (6) 07:42 (6)	05:50 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:35 16:43
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	07:31 (6) 07:42 (6)	06:47 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:36 16:41
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	07:28 (6) 07:41 (6)	06:45 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	08:38 16:39
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	07:29 (6) 07:39 (6)	06:42 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:21 (5) 07:25 (5)	08:39 16:37
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	07:31 (6) 07:37 (6)	06:40 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:19 (5) 07:27 (5)	08:40 16:35
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:37 (6) 07:43 (6)	06:37 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:19 (5) 07:28 (5)	08:41 16:34
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:42 (6) 07:48 (6)	06:35 21:22	04:50 22:06	05:05 22:02	05:56 21:10	06:53 19:55	07:21 (5) 07:29 (5)	08:43 16:32
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	07:15 (1) 07:16 (1)	06:33 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:23 (5) 07:29 (5)	08:44 16:30
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	07:13 (1) 07:17 (1)	06:30 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:24 (5) 07:27 (5)	08:45 16:28
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	07:10 (1) 07:16 (1)	06:28 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:47	07:26 (5) 07:27 (5)	08:46 16:27
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	07:08 (1) 07:16 (1)	06:25 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:47 16:25
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	07:05 (1) 07:15 (1)	06:23 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:47 16:24
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	07:05 (1) 07:12 (1)	06:20 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:48 16:22
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	07:12 (1) 07:18 (1)	06:18 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:49 16:20
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	07:18 (1) 07:24 (1)	06:16 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:50 16:19
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	07:24 (1) 07:30 (1)	06:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:50 16:18
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	07:33 (5) 07:39 (5)	06:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:51 16:16
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	07:42 (6) 07:48 (6)	06:09 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:51 16:15
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	07:54 (6) 07:59 (6)	06:06 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:52 16:14
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	07:59 (6) 08:05 (6)	06:04 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	07:50 (1) 07:55 (1)	08:52 16:12
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	08:12 (6) 08:18 (6)	06:02 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:47 (1) 07:56 (1)	08:52 16:11
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	08:24 (6) 08:30 (6)	05:59 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:48 (1) 07:57 (1)	08:53 16:10
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	08:36 (6) 08:42 (6)	05:57 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	07:50 (1) 07:57 (1)	08:53 16:09
29	08:26 16:58	07:20 19:58	06:10 19:58	05:55 20:58	08:48 (6) 08:54 (6)	05:55 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	07:52 (1) 07:57 (1)	08:53 16:08
30	08:24 17:00	07:08 20:00	06:08 20:00	05:53 21:00	08:54 (6) 08:59 (6)	05:53 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	07:54 (1) 07:56 (1)	08:53 16:07
31	08:22 17:02	07:05 20:01	06:05 20:01	05:53 21:00	09:00 (6) 09:05 (6)	05:59 21:53	04:59 21:34	05:34 20:25	06:31 20:25	07:28 16:55	07:58 (1) 16:55	08:53 16:09
Potential sun hours	244	270	366	422		499	517	519	464	383	327	254
Total, worst case			113		22					76		60
Sun reduction			0,34		0,39					0,40		0,31
Oper. time red.			1,00		1,00					1,00		1,00
Wind dir. red.			0,98		1,00					1,00		0,97
Total reduction			0,34		0,39					0,39		0,30
Total, real			38		9					30		18

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	08:06 (6) 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	08:03 (6) 16:49	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 07:37 (6)	06:52 20:11	05:42 21:09	04:55 21:59	05:43 22:08	06:40 21:25	07:36 18:56	08:04 (6) 16:45	08:38 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (6) 07:37 (6)	06:50 20:13	05:40 21:11	04:54 22:00	05:45 21:23	06:42 20:10	07:38 18:54	08:06 (6) 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (6) 07:38 (6)	06:47 20:15	05:38 21:13	04:53 22:01	05:46 21:21	06:44 20:08	07:40 18:51	08:08 (6) 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (6) 07:37 (6)	06:45 20:17	05:36 21:15	04:52 22:02	05:48 21:18	06:46 20:05	07:42 18:49	08:10 (6) 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 07:36 (6)	06:42 20:19	05:34 21:17	04:52 22:03	05:50 22:05	06:48 20:03	07:44 18:46	08:13 (6) 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	07:24 (6) 07:35 (6)	06:40 20:21	05:32 21:19	04:51 22:04	05:52 22:02	06:50 21:14	07:46 18:44	08:08 (6) 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	07:25 (6) 07:33 (6)	06:37 20:23	05:30 21:20	04:51 22:05	05:54 22:03	06:51 21:12	07:48 18:42	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:56 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:35	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:24	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	07:16 17:08	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:18 17:06	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:20 17:04	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	07:22 17:02	08:22 16:09	08:53 16:06
29	08:26 16:58	07:10 19:58	07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	07:24 17:00	08:24 16:08	08:53 16:07
30	08:24 17:00	07:08 20:00	07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	07:26 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02	07:05 20:01	07:05 20:01	04:59 21:53	04:59 21:53	05:34 21:34	05:34 20:25	06:31 20:25	07:28 16:55	07:28 16:55	08:27 16:09	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case			51							53		
Sun reduction			0,34							0,31		
Oper. time red.			1,00							1,00		
Wind dir. red.			0,98							0,98		
Total reduction			0,33							0,30		
Total, real			17							16		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53	08:20	07:20	07:03	05:51	04:58	04:54	05:36	06:33	07:29	08:01 (6)	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:07	7 08:08 (6)	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:59 (6)	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	10 08:09 (6)	16:51	16:05
3	08:52	08:17	07:16	06:58	05:46	04:56	04:55	05:39	06:37	07:33	08:00 (6)	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	10 08:10 (6)	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	08:02 (6)	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	8 08:10 (6)	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:55	04:57	05:43	06:40	07:36	08:04 (6)	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	6 08:10 (6)	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:45	06:42	07:38	08:06 (6)	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	3 08:09 (6)	16:43	16:03
7	08:51	08:09	07:06	07:31 (6)	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	2 07:33 (6)	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	07:28 (6)	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	5 07:33 (6)	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:02
9	08:50	08:05	07:01	07:25 (6)	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:21	18:18	7 07:32 (6)	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	07:23 (6)	06:40	05:32	04:51	05:02	05:52	06:50	07:46	07:48	08:40
	16:23	17:23	18:20	9 07:32 (6)	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	07:20 (6)	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	11 07:31 (6)	20:23	21:20	22:05	22:03	21:12	19:58	18:42	16:34	16:01
12	08:47	07:59	06:53	07:21 (6)	06:35	05:28	04:50	05:05	05:56	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	9 07:30 (6)	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	07:24 (6)	06:33	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	1 07:25 (6)	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:50	05:07	05:59	06:57	07:54	07:56	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00	
15	08:45	07:53	06:46	06:28	05:23	04:49	05:09	06:01	06:59	07:56	07:58	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:48	18:32	16:27	16:00	
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47	
	16:33	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00	
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48	
	16:34	17:37	18:34	20:35	21:31	22:09	21:56	20:59	19:42	18:27	16:24	16:00	
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48	
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:25	16:22	16:00	
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:09	07:06	08:04	08:06	08:49	
	16:38	17:42	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01	
20	08:39	07:42	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50	
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01	
21	08:38	07:39	06:31	06:13	05:13	04:49	05:17	06:12	07:10	08:08	08:10	08:50	
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:18	16:18	16:01	
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51	
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:30	18:15	16:16	16:02	
23	08:35	07:35	06:25	06:09	05:10	04:50	05:20	06:16	07:14	08:12	08:13	08:51	
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02	
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:16	08:14	08:15	08:52	
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03	
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	07:16	08:17	08:52	
	16:50	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:04	
26	08:30	07:28	06:18	06:02	05:05	04:51	05:25	06:22	07:19	07:18	08:19	08:52	
	16:52	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04	
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53	
	16:54	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05	
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	07:22	08:22	08:53	
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06	
29	08:26	07:10	06:00	05:55	05:02	04:52	05:30	06:27	07:25	07:24	08:24	08:53	
	16:58	19:58	19:58	20:58	21:50	22:10	21:38	20:30	19:12	17:00	16:08	16:07	
30	08:24	07:08	06:00	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53	
	17:00	20:00	20:00	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08	
31	08:22	07:05	06:00	05:51	04:59	04:59	05:34	06:31	07:28	07:28	08:27	08:53	
	17:02	20:01	20:01	21:01	21:53	21:53	21:34	20:25	16:55	16:55	16:07	16:09	
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227	
Total, worst case					44						44		
Sun reduction					0,34						0,31		
Oper. time red.					1,00						1,00		
Wind dir. red.					0,98						0,98		
Total reduction					0,34						0,30		
Total, real					15						13		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:56 (6) 08:06 (6)	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:58 (6) 08:06 (6)	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:37 20:18	07:33 19:01	08:00 (6) 08:06 (6)	07:34 16:49	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	08:02 (6) 08:06 (6)	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	08:04 (6) 08:05 (6)	07:38 16:45	08:34 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:05 (6)	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:06 (6)	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	08:07 (6)	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 06:42	05:34 20:19	04:52 21:17	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	08:08 (6)	07:46 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	07:23 (6) 06:40	05:32 20:21	04:51 21:19	05:02 22:04	05:52 21:14	06:50 20:00	07:46 18:44	08:09 (6)	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (6) 06:37	05:30 20:23	04:51 21:20	05:03 22:05	05:54 21:12	06:51 19:58	07:48 18:42	08:10 (6)	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	07:18 (6) 06:35	05:28 20:25	04:50 21:22	05:05 22:06	05:56 21:10	06:53 19:55	07:50 18:39	08:11 (6)	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	07:17 (6) 06:33	05:26 20:27	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	08:12 (6)	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	07:20 (6) 06:30	05:24 20:29	04:50 21:26	05:07 22:07	05:59 21:06	06:57 19:50	07:54 18:34	08:13 (6)	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	07:23 (6) 06:28	05:23 20:29	04:49 21:28	05:09 22:08	06:01 21:03	06:59 19:48	07:56 18:32	08:14 (6)	07:58 16:27	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:15 (6)	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:35	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:16 (6)	08:02 16:24	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:17 (6)	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:18 (6)	08:06 16:20	08:49 16:01
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:19 (6)	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:20 (6)	08:10 16:18	08:50 16:01
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23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:50 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:22 (6)	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:23 (6)	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:16 17:08	08:24 (6)	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	08:18 17:06	08:25 (6)	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:20 17:04	08:26 (6)	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	08:22 17:02	08:27 (6)	08:22 16:09	08:53 16:06
29	08:26 16:58	07:10 19:58	06:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	08:24 17:00	08:28 (6)	08:24 16:08	08:53 16:07
30	08:24 17:00	07:08 20:00	06:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	08:26 16:57	08:29 (6) 08:04 (6)	08:26 16:07	08:53 16:08
31	08:22 17:02	07:05 20:01	06:05 20:01	05:51 21:53	05:00 21:53	04:59 22:10	05:34 21:34	06:31 20:25	07:28 16:55	08:28 16:55	08:31 (6)	08:28 16:07	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227	
Total, worst case													
Sun reduction			0,36						0,40		0,31		
Oper. time red.			1,00						1,00		1,00		
Wind dir. red.			0,99						0,99		0,99		
Total reduction			0,34						0,39		0,30		
Total, real			12						3		9		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Calendar

Calculation: Planuojamos Enercon E82 Shut downShadow receptor: M - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

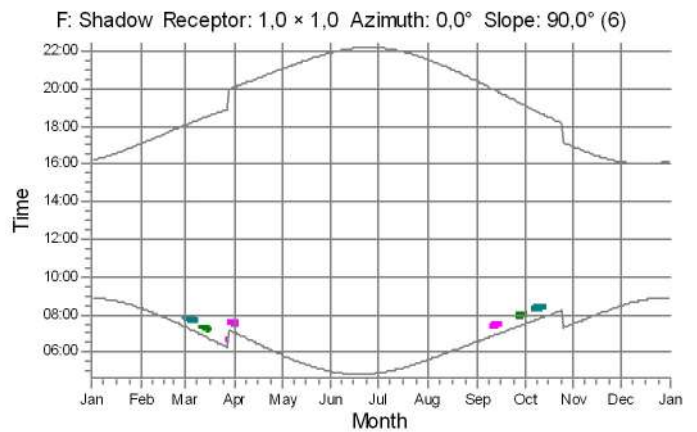
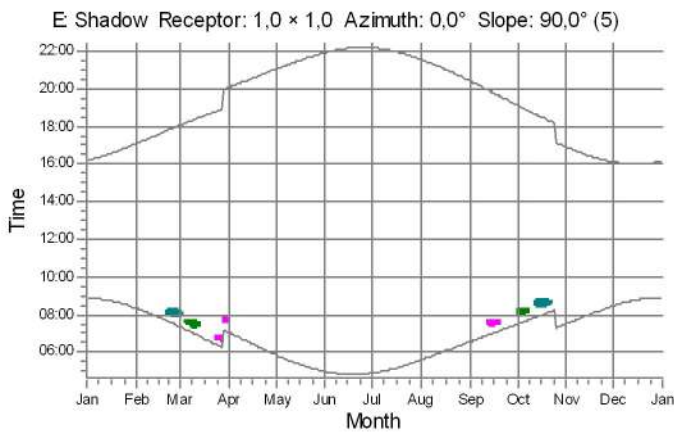
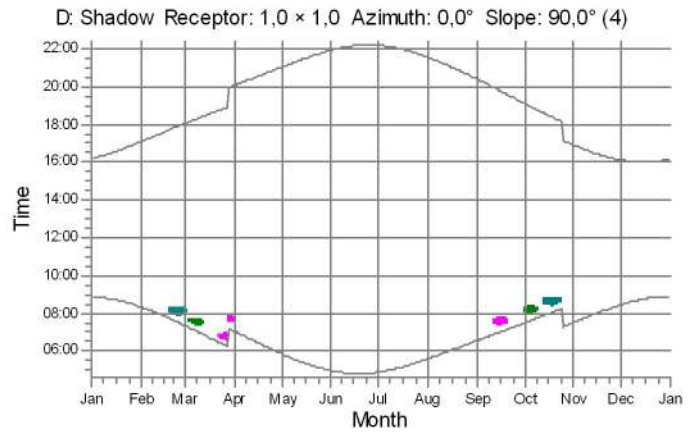
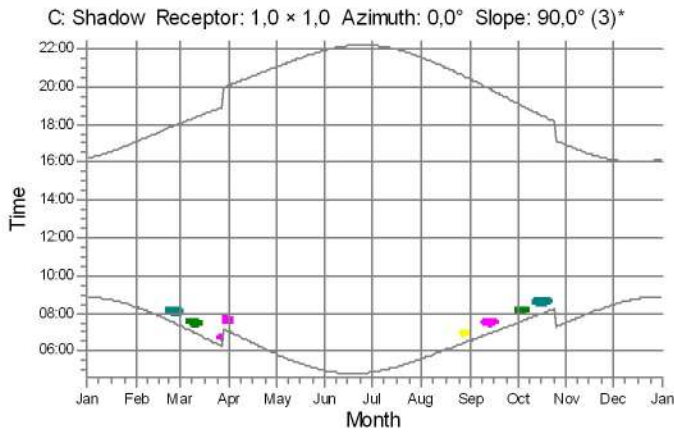
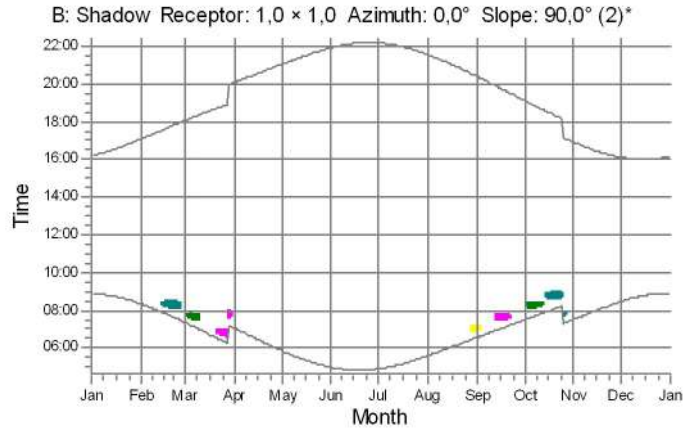
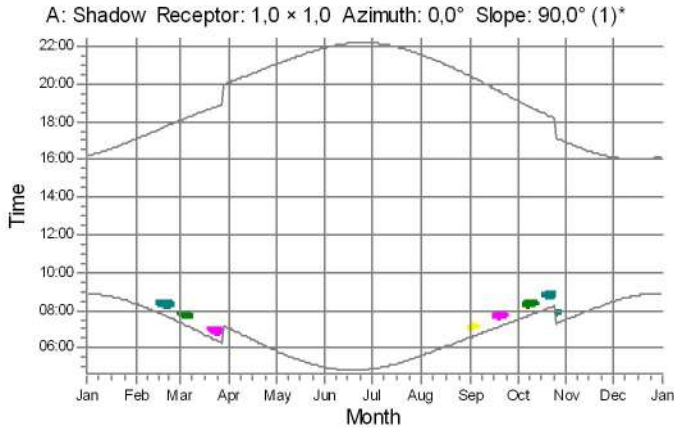
Table with 12 columns (January to December) and 31 rows of shadow data. Each row contains 12 pairs of start and end times. Summary rows at the bottom include Potential sun hours, Total, worst case, Sun reduction, Oper. time red., Wind dir. red., Total reduction, and Total, real.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E82 Shut down



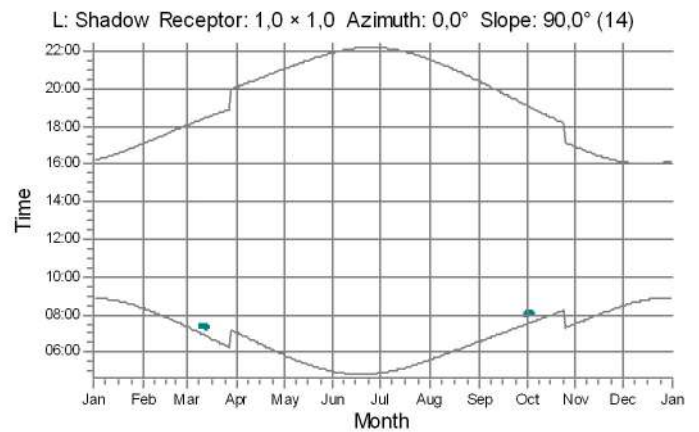
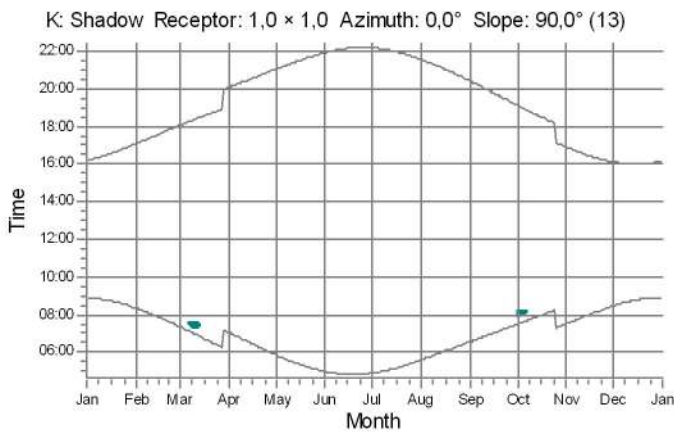
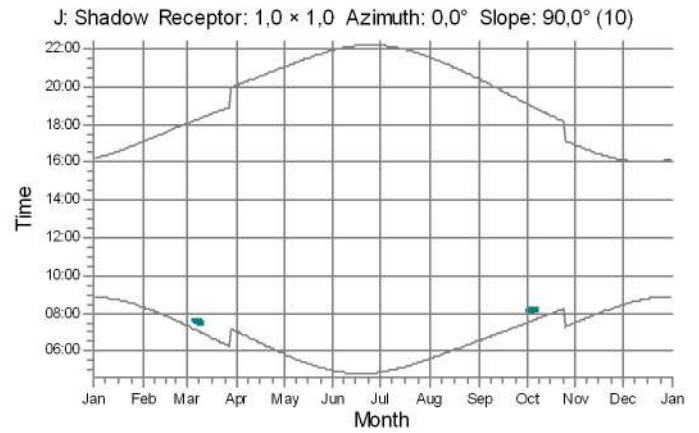
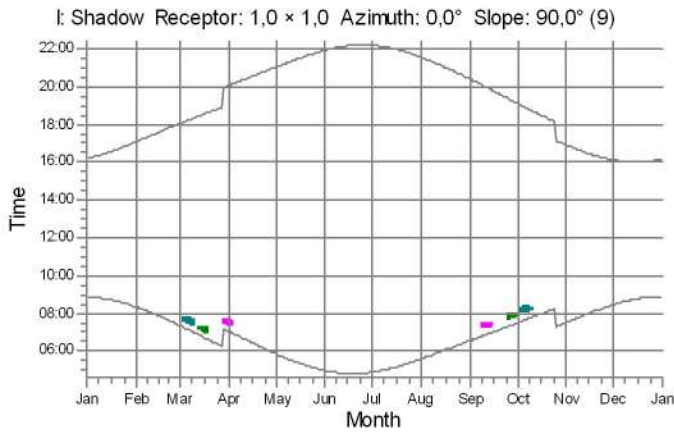
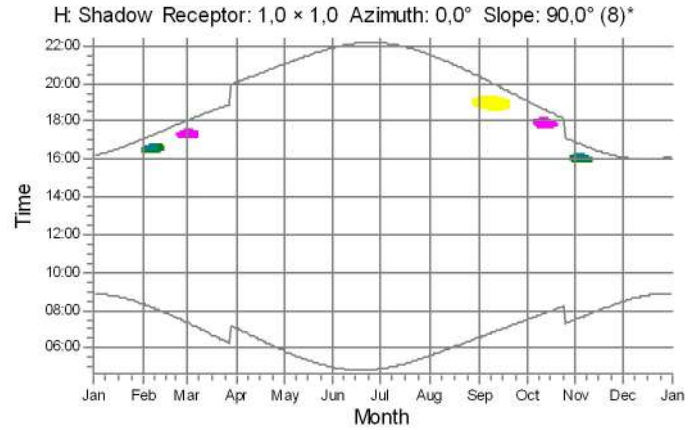
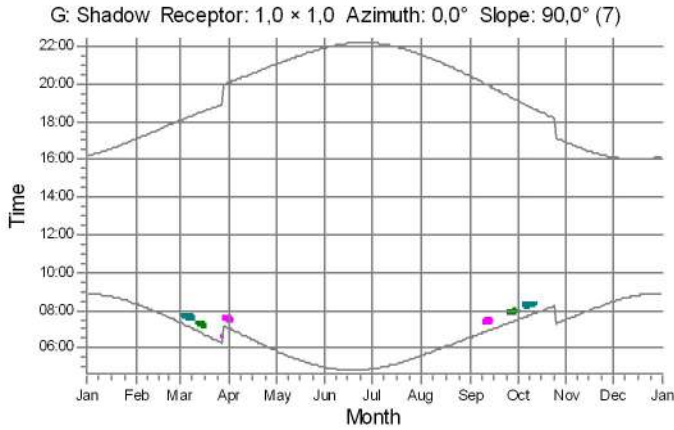
WTGs

- 1: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (1)
- 2: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (2)
- 5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

* Results reduced by flicker curtailment

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E82 Shut down



WTGs

- 1: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (1)
- 2: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (2)
- 5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

* Results reduced by flicker curtailment

Project:

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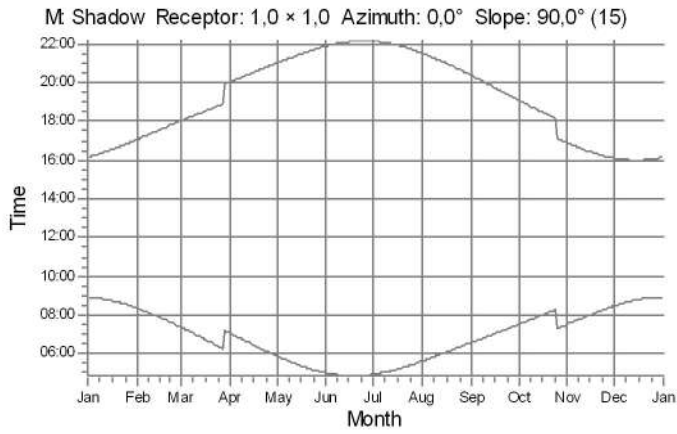
Raminta Survilè / r.survile@infraplanas.lt

Calculated:

2021.06.16 10:38/3.4.415

SHADOW - Calendar, graphical

Calculation: Planuojamos Enercon E82 Shut down



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E82 Shut downWTG: 1 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and 31 rows of daily data. Each cell contains a time range (e.g., 08:53 | 08:20) and a shadow status (0 or 1). Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
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SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E82 Shut downWTG: 2 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker). Summary rows at the bottom show Potential sun hours and Sum of minutes with flicker.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E82 Shut downWTG: 3 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:22	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
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14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
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	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
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	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
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	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
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	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
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29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E82 Shut downWTG: 4 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:30	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:02	16:09	16:06
29	08:25		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E82 Shut downWTG: 5 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains sun rise and set times and a 'Sum' column at the bottom.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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SHADOW - Calendar per WTG

Calculation: Planuojamos Enercon E82 Shut downWTG: 6 - ENERCON E-82 2000 82.0 !OI! hub: 78,3 m (TOT: 119,3 m) (10)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (e.g., 08:53 | 17:04) and a numerical value representing shadow minutes. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

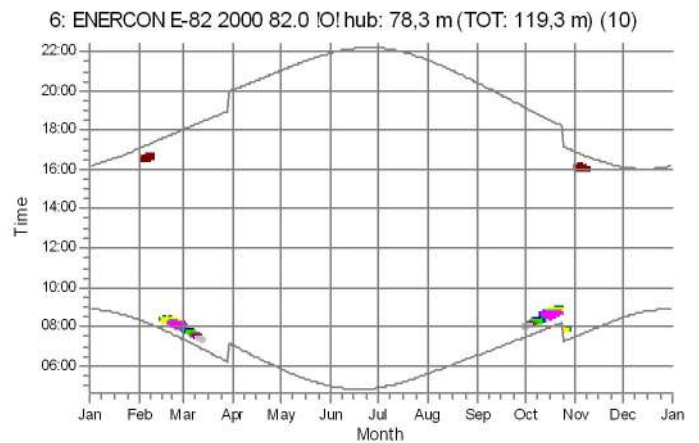
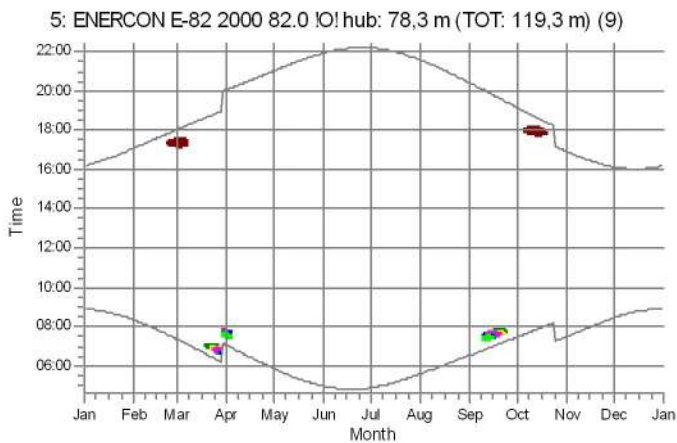
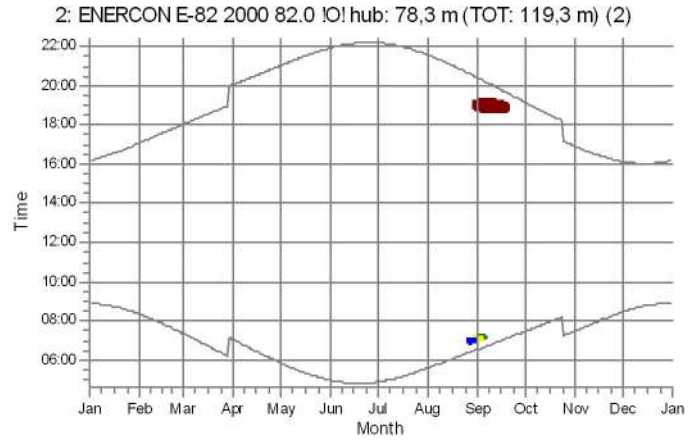
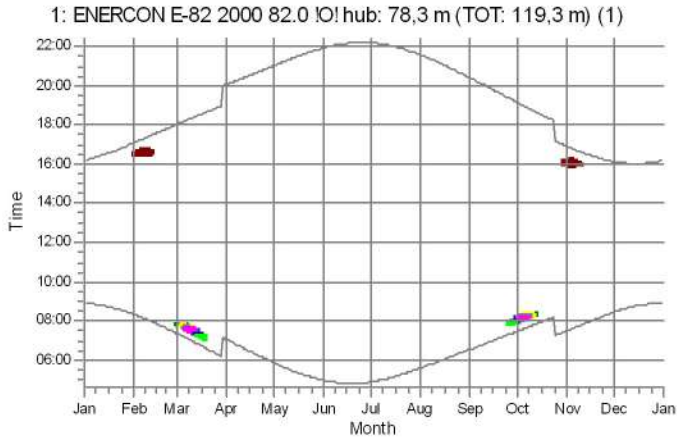
Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



SHADOW - Calendar per WTG, graphical

Calculation: Planuojamos Enercon E82 Shut down



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)*
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)*
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)*
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)

- G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)*
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

* Results reduced by flicker curtailment

Project:

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Calculated:

2021.06.16 10:38/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E82 Shut downWTG: 1 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (1)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
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20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:
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SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E82 Shut downWTG: 2 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (2)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1				18:47-19:22								
2				18:46-19:22								
3				18:46-19:22								
4				18:46-19:21								
5				18:46-19:21								
6				18:46-19:20								
7				18:46-19:19 07:12-07:15								
8				18:46-19:18 07:09-07:14								
9				18:47-19:17 07:07-07:14								
10				18:48-19:15 07:04-07:13								
11				18:49-19:14 07:02-07:12								
12				18:50-19:12 07:00-07:09								
13				18:52-19:10 06:57-07:07								
14				18:56-19:07 06:55-07:06								
15				06:52-07:01								
16				06:51-07:00								
17				06:53-06:58								
18												
19												
20												
21												
22												
23			18:01-18:12									
24			17:58-18:16									
25			17:55-18:17									
26			17:54-18:19									
27			17:51-18:20									
28			17:51-18:21									
29			18:49-19:21									
30			18:49-19:22									
31			18:47-19:22									

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E82 Shut downWTG: 3 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E82 Shut downWTG: 4 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E82 Shut downWTG: 5 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
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20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

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Calculated:
2021.06.16 10:38/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Planuojamos Enercon E82 Shut downWTG: 6 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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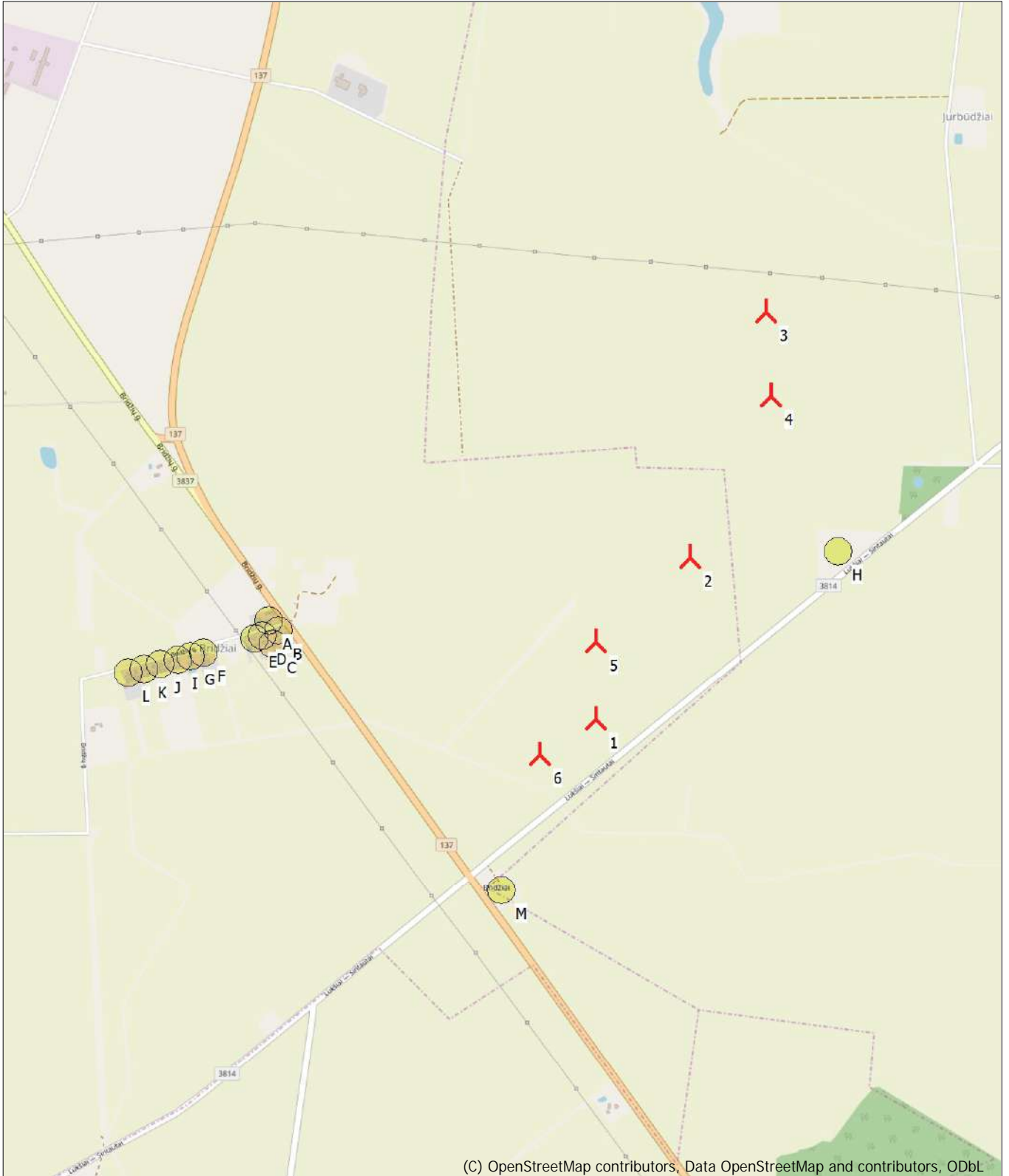
Raminta Survilè / r.survile@infraplanas.lt

Calculated:

2021.06.16 10:38/3.4.415

SHADOW - Map

Calculation: Planuojamos Enercon E82 Shut down



0 250 500 750 1000m

Map: EMD OpenStreetMap , Print scale 1:20.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 441.861 North: 6.087.769

New WTG

Shadow receptor

Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
 K. Donelacio str. 55-2
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 Raminta Survilė / r.survilė@infraplanas.lt
 Calculated:
 2021.06.16 10:47/3.4.415

SHADOW - Main Result

Calculation: Suplanuotos kitais projektais
 Assumptions for shadow calculations

Maximum distance for influence
 Calculate only when more than 20 % of sun is covered by the blade
 Please look in WTG table

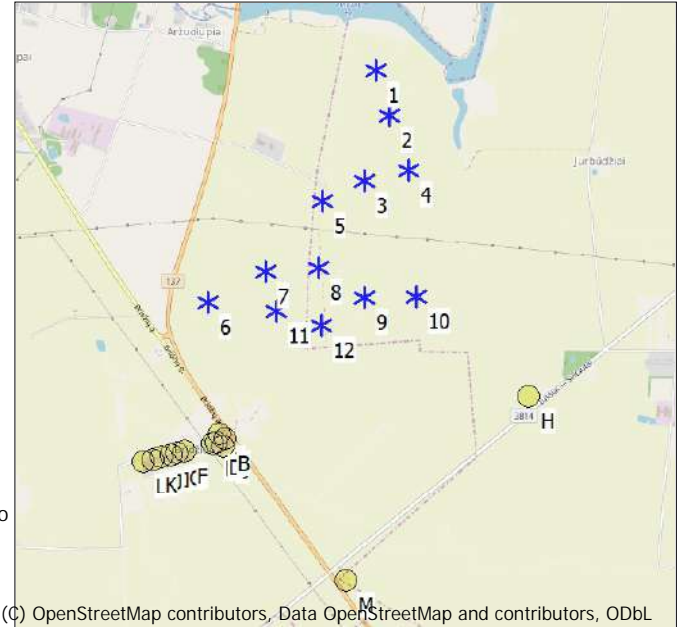
Minimum sun height over horizon for influence 3 °
 Day step for calculation 1 days
 Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
 Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo
 Obstacles used in calculation
 Eye height for map: 1,5 m
 Grid resolution: 1,0 m

All coordinates are in
 Lithuanian TM LKS94-LKS94 (LT)
 WTGs



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL
 Scale 1:50.000
 * Existing WTG
 Shadow receptor

Y	X	Z	Row data/Description	WTG type		Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
				Valid	Manufact.					Calculation distance [m]	RPM [RPM]
		[m]									
1	442.152	6.090.108	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
2	442.241	6.089.811	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
3	442.064	6.089.378	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
4	442.365	6.089.446	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
5	441.791	6.089.249	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
6	441.022	6.088.592	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
7	441.405	6.088.791	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
8	441.755	6.088.807	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
9	442.055	6.088.609	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
10	442.405	6.088.612	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
11	441.469	6.088.526	50,0 GE WIND ENERGY 5....	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0
12	441.767	6.088.429	50,0 GE WIND ENERGY 5....	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0

Shadow receptor-Input

No.	Y	X	Z	Width [m]	Height [m]	Elevation a.g.l. [m]	Slope of window [°]	Direction mode	Eye height (ZVI) a.g.l. [m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

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SHADOW - Main Result

Calculation: Suplanuotos kitais projektais

Calculation Results

Shadow receptor

Shadow, expected values

No. Shadow hours

per year
[h/year]

A	5:40
B	2:52
C	1:35
D	4:12
E	4:45
F	0:00
G	0:00
H	20:19
I	0:00
J	1:02
K	2:14
L	2:05
M	0:00

Total amount of flickering on the shadow receptors caused by each WTG

No. Name

Worst case
[h/year]

Expected
[h/year]

1	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)	0:00	0:00
2	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)	0:00	0:00
3	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)	0:00	0:00
4	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)	0:00	0:00
5	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)	0:00	0:00
6	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)	0:00	0:00
7	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)	0:00	0:00
8	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)	22:38	9:40
9	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)	32:58	13:47
10	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (11)	17:16	6:40
11	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)	8:59	4:11
12	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)	20:12	9:03

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

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SHADOW - Calendar

Calculation: Suplanuotos kitais projektais Shadow receptor: A - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Assumptions for shadow calculations

Shine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and rows for each day of the year (1-31). Columns contain sun rise/set times, shadow start/end times, and potential sun hours. Summary rows at the bottom show total sun hours and various reductions.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suplanuotos kitais projektais Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:30 (10) 05:44 (10)	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56	04:54 22:09	05:31 (10) 05:44 (10)	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:32 (10) 05:44 (10)	05:39 21:29	06:36 20:18	07:32 19:01	07:34 16:49
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:33 (10) 05:44 (10)	05:41 21:27	06:38 20:15	07:34 18:59	07:36 16:47
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:34 (10) 05:44 (10)	05:43 21:25	06:40 20:13	07:36 18:56	07:38 16:45
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:29 (10) 05:36 (10)	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:28 (10) 05:37 (10)	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:27 (10) 05:38 (10)	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:27 (10) 05:39 (10)	05:01 22:05	06:48 21:16	07:44 20:03	07:46 18:46
10	08:49 16:22	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:19	04:51 22:04	05:02 22:04	05:27 (10) 05:40 (10)	05:02 22:04	06:49 21:14	07:46 20:00	07:48 18:44
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:26 (10) 05:40 (10)	05:03 22:03	06:51 21:12	07:48 19:58	07:50 18:41
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:26 (10) 05:41 (10)	05:05 22:02	06:53 21:10	07:50 19:55	07:52 18:39
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:26 (10) 05:42 (10)	05:06 22:01	06:55 21:08	07:52 19:53	07:54 18:37
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:25 (10) 05:41 (10)	05:07 22:00	06:57 21:06	07:54 19:50	07:56 18:34
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:08 21:59	05:25 (10) 05:42 (10)	05:08 21:59	06:59 21:03	07:56 19:47	07:58 18:32
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	05:26 (10) 05:42 (10)	05:10 21:58	07:01 21:01	07:58 19:45	08:00 18:29
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:11 21:56	05:26 (10) 05:43 (10)	05:11 21:56	06:05 20:59	07:02 19:42	08:02 18:27
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	05:26 (10) 05:43 (10)	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	05:26 (10) 05:43 (10)	05:14 21:54	06:08 20:54	07:06 19:37	08:04 18:22
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	05:26 (10) 05:43 (10)	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	05:27 (10) 05:44 (10)	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	05:27 (10) 05:44 (10)	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	05:27 (10) 05:44 (10)	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	05:27 (10) 05:44 (10)	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	05:28 (10) 05:45 (10)	05:24 21:45	06:20 20:40	07:17 19:22	08:17 17:08
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	05:28 (10) 05:45 (10)	05:25 21:43	06:22 20:38	07:19 19:19	08:18 17:06
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	05:28 (10) 05:45 (10)	05:27 21:41	06:23 20:35	07:21 19:17	08:20 17:04
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	05:28 (10) 05:45 (10)	05:29 21:40	06:25 20:33	07:23 19:14	08:22 17:02
29	08:26 16:58	07:22 19:58	06:12 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	05:29 (10) 05:45 (10)	05:30 21:38	06:27 20:30	07:25 19:12	08:24 17:00
30	08:24 17:00	07:20 20:00	06:08 21:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	05:30 (10) 05:45 (10)	05:32 21:36	06:29 20:28	07:27 19:09	08:26 16:57
31	08:22 17:02	07:17 20:01	06:05 21:01	05:54 21:53	05:04 21:53	04:59 21:53	05:34 21:34	05:34 21:34	05:34 21:34	06:31 20:25	07:28 16:55	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case						382						
Sun reduction						0,48		0,49				
Oper. time red.						1,00		1,00				
Wind dir. red.						0,78		0,78				
Total reduction						0,38		0,38				
Total, real						145		27				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Calculated:
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SHADOW - Calendar

Calculation: Suplanuotos kitais projektais Shadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:29 (10) 05:37 (10)	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56	04:54 22:09	8 05:37 (10) 6 05:37 (10)	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:33 (10) 2 05:35 (10)	05:39 21:29	06:36 20:18	07:32 19:01	07:34 16:49
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	07:38 16:45	08:33 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:54 22:07	05:45 21:23	06:42 20:10	07:38 18:54	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:53 22:06	05:46 21:21	06:44 20:08	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:22	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:19	04:51 22:04	05:02 22:04	5 05:32 (10) 05:25 (10)	05:02 05:03	06:49 18:44	07:46 18:44	07:48 16:35
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:41	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	8 05:33 (10) 9 05:34 (10)	05:05 21:10	06:53 19:55	07:50 18:39	07:52 16:32
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	10 05:35 (10) 11 05:35 (10)	05:07 21:06	06:57 19:50	07:54 18:34	07:56 16:28
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	12 05:34 (10) 12 05:36 (10)	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:23	08:47 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	13 05:37 (10) 13 05:37 (10)	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	12 05:36 (10) 13 05:37 (10)	06:08 20:54	07:06 19:37	08:04 18:22	08:06 16:20
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	13 05:35 (10) 14 05:39 (10)	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	13 05:38 (10) 13 05:38 (10)	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	13 05:38 (10) 13 05:38 (10)	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	13 05:38 (10) 13 05:38 (10)	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	13 05:39 (10) 13 05:39 (10)	06:20 20:40	07:17 19:22	07:16 17:08	08:17 16:12
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	13 05:39 (10) 12 05:38 (10)	06:22 20:38	07:19 19:19	07:18 17:06	08:19 16:11
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	12 05:39 (10) 12 05:39 (10)	06:23 20:35	07:21 19:17	07:20 17:04	08:21 16:10
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	11 05:38 (10) 11 05:38 (10)	06:25 20:33	07:23 19:14	07:22 17:02	08:22 16:09
29	08:26 16:58	07:10 19:58	07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	10 05:28 (10) 10 05:38 (10)	06:27 20:30	07:25 19:12	07:24 17:00	08:24 16:08
30	08:24 17:00	07:08 20:00	05:53 21:00	05:00 21:52	04:53 21:52	04:53 22:10	05:32 21:36	9 05:29 (10) 9 05:38 (10)	06:29 20:28	07:27 19:09	07:26 16:57	08:26 16:07
31	08:22 17:02	07:05 20:01	07:05 20:01	04:59 21:53	04:59 21:53	04:59 21:53	05:34 21:34	06:31 20:25	07:28 16:55	07:28 16:55	07:28 16:55	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case						239						16
Sun reduction						0,48						0,49
Oper. time red.						1,00						1,00
Wind dir. red.						0,77						0,77
Total reduction						0,37						0,38
Total, real						89						6

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suplanuotos kitais projektais Shadow receptor: D - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:31 (10) 21:32	06:33 20:23	07:29 19:07	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56	05:30 (10) 22:09	05:31 (10) 21:30	06:35 20:20	07:31 19:04	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	05:30 (10) 22:09	05:32 (10) 21:29	06:36 20:18	07:32 19:01	07:34 16:49	08:30 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	05:29 (10) 22:08	05:33 (10) 21:27	06:38 20:15	07:34 18:59	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	05:28 (10) 22:08	05:33 (10) 21:25	06:40 20:13	07:36 18:56	07:38 16:45	08:33 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	05:28 (10) 22:07	05:33 (10) 21:23	06:42 20:10	07:38 18:54	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	05:27 (10) 22:06	05:34 (10) 21:21	06:44 20:08	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:27 (10) 22:06	05:35 (10) 21:18	06:46 20:05	07:42 18:49	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:27 (10) 22:05	05:36 (10) 21:16	06:48 20:03	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:22	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:19	04:51 22:04	05:27 (10) 22:04	05:37 (10) 21:14	06:49 20:00	07:46 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:26 (10) 22:03	05:40 (10) 21:12	06:51 19:58	07:48 18:41	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:27 (10) 22:02	05:55 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:25 (10) 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:26 (10) 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:26 (10) 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:27 (10) 21:58	06:03 21:01	06:59 19:45	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:27 (10) 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:23	08:47 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:27 (10) 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:27 (10) 21:54	06:08 20:54	07:06 19:37	08:04 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:27 (10) 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:28 (10) 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:28 (10) 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:28 (10) 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:28 (10) 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:29 (10) 21:45	06:20 20:40	07:17 19:22	07:16 17:08	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:29 (10) 21:43	06:22 20:38	07:19 19:19	07:18 17:06	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:30 (10) 21:41	06:23 20:35	07:21 19:17	07:20 17:04	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 (10) 21:40	06:25 20:33	07:23 19:14	07:22 17:02	08:22 16:09	08:53 16:06
29	08:26 16:58	07:10 19:58	07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 (10) 21:38	06:27 20:30	07:25 19:12	07:24 17:00	08:24 16:08	08:53 16:07
30	08:24 17:00	07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	04:53 22:10	05:31 (10) 21:36	06:29 20:28	07:27 19:09	07:26 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02	07:05 20:01	07:05 20:01	04:59 21:53	04:59 21:53	04:59 21:53	05:34 21:34	06:31 20:25	07:28 16:55	07:28 16:55	08:53 16:09	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case						509		148				
Sun reduction						0,48		0,49				
Oper. time red.						1,00		1,00				
Wind dir. red.						0,79		0,79				
Total reduction						0,38		0,39				
Total, real						195		57				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar

Calculation: Suplanuotos kitais projektais Shadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	05:30 (10) 22:10	04:54 19 05:50 (10)	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53	
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56	05:29 (10) 22:09	04:54 19 05:51 (10)	05:32 (10) 21:30	06:35 20:20	07:31 19:04	07:32 16:05	
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	05:29 (10) 22:09	04:55 19 05:51 (10)	05:32 (10) 21:29	06:36 20:18	07:32 19:01	07:34 16:05	
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	05:29 (10) 22:08	04:56 18 05:51 (10)	05:33 (10) 21:27	06:38 20:15	07:34 18:59	07:36 16:04	
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	05:28 (10) 22:08	04:57 17 05:51 (10)	05:34 (10) 21:25	06:40 20:13	07:36 18:56	07:38 16:03	
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	05:28 (10) 22:07	04:58 17 05:50 (10)	05:35 (10) 21:23	06:42 20:10	07:38 18:54	07:40 16:03	
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11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:27 (10) 22:03	05:03 10 05:48 (10)	05:38 (10) 21:12	06:51 19:58	07:48 18:41	07:50 16:01	
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:27 (10) 22:02	05:05 7 05:47 (10)	05:40 (10) 21:10	06:53 19:55	07:50 18:39	07:52 16:02	
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:28 (10) 22:01	05:06 19 05:47 (10)	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:00	
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19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:28 (10) 21:54	05:14 20 05:48 (10)	06:08 20:54	07:06 19:37	08:04 18:22	08:06 16:01	
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21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:29 (10) 21:51	05:17 21 05:50 (10)	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:01	
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25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:30 (10) 21:45	05:24 20 05:50 (10)	06:20 20:40	07:17 19:22	08:17 17:08	08:17 16:04	
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:29 (10) 21:43	05:25 21 05:50 (10)	06:22 20:38	07:19 19:19	08:19 17:06	08:19 16:04	
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:30 (10) 21:41	05:27 20 05:50 (10)	06:23 20:35	07:21 19:17	08:21 17:04	08:53 16:05	
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:30 (10) 21:40	05:29 20 05:50 (10)	06:25 20:33	07:23 19:14	08:22 17:02	08:53 16:06	
29	08:26 16:58	07:20 19:58	06:10 20:58	05:55 21:50	05:02 21:50	04:52 22:10	05:31 (10) 21:38	05:30 20 05:51 (10)	06:27 20:30	07:25 19:12	08:24 17:00	08:53 16:08	
30	08:24 17:00	07:08 20:00	05:53 21:00	05:00 21:52	05:00 21:52	04:53 22:10	05:31 (10) 21:36	05:32 20 05:51 (10)	06:29 20:28	07:27 19:09	08:26 16:57	08:53 16:08	
31	08:22 17:02	07:05 20:01	05:51 21:01	05:00 21:53	05:00 21:53	04:59 21:53	05:32 (10) 21:34	05:34 21:34	06:31 20:25	07:28 16:55	08:27 16:07	08:53 16:09	
Potential sun hours	244	270	366	422	499	517	552	519	464	383	327	254	227
Total, worst case					5		0,52						
Sun reduction					0,52		0,48						
Oper. time red.					1,00		1,00						
Wind dir. red.					0,79		0,79						
Total reduction					0,41		0,39						
Total, real					2		213						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas
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+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar

Calculation: Suplanuotos kitais projektais Shadow receptor: F - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	07:34 16:49	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	07:13 20:09	06:55 21:07	05:44 21:58	04:55 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	07:38 16:45	08:34 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:46 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:42	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:56 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:23	08:47 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	07:16 17:08	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:18 17:06	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:20 17:04	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	07:22 17:02	08:22 16:09	08:53 16:06
29	08:26 16:58	07:20 19:58	06:10 20:58	05:55 21:50	05:02 22:10	04:52 21:38	05:30 20:30	06:27 19:12	07:25 17:00	07:24 17:00	08:24 16:08	08:53 16:07
30	08:24 17:00	07:08 20:00	05:53 21:00	05:53 21:52	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	07:26 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02	07:05 20:01	05:51 21:01	04:59 21:53	05:04 21:53	04:51 21:53	05:27 21:34	06:23 20:25	07:21 16:55	07:20 16:55	08:21 16:07	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
 K. Donelaicio str. 55-2
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 +370 37 407548
 Raminta Survilè / r.surville@infraplanas.lt
 Calculated:
 2021.06.16 10:47/3.4.415

SHADOW - Calendar

Calculation: Suplanuotos kitais projektai Shadow receptor: G - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:03	05:51	04:58	04:54	05:36	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:07	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:33	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:55	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:45	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:02
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:23	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:42	16:34	16:01
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:56	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:33	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:50	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:09	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:33	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:09	07:06	08:04	08:06	08:49
	16:38	17:42	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:31	06:13	05:13	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:18	16:18	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:30	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:16	08:14	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:16	08:17	08:52
	16:50	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:51	05:25	06:22	07:19	08:18	08:19	08:52
	16:52	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:54	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	08:22	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:01	16:09	16:06
29	08:26		07:10	05:55	05:02	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		20:00	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suplanuotos kitais projektais Shadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53	08:20	07:20	07:02	05:50	20:00 (12)
	16:10	17:04	18:02	20:03	21:01	25 20:25 (12) 21:54 30 21:09 (8)
2	08:53	08:19	07:18	07:00	05:48	20:00 (12) 04:57 20:39 (9)
	16:11	17:06	18:04	20:05	21:03	25 20:25 (12) 21:56 30 21:09 (8)
3	08:52	08:17	07:15	06:57	05:46	19:59 (12) 04:56 20:39 (9)
	16:13	17:08	18:06	20:07	21:05	26 20:25 (12) 21:57 30 21:09 (8)
4	08:52	08:15	07:13	06:55	05:44	19:59 (12) 04:55 20:39 (9)
	16:14	17:10	18:08	20:09	21:07	26 20:25 (12) 21:58 31 21:10 (8)
5	08:52	08:13	07:11	06:52	05:42	19:59 (12) 04:54 20:39 (9)
	16:15	17:12	18:10	20:11	21:09	26 20:25 (12) 21:59 30 21:09 (8)
6	08:51	08:11	07:08	06:50	05:40	19:59 (12) 04:54 20:39 (9)
	16:16	17:14	18:12	20:13	21:11	25 20:24 (12) 22:00 30 21:09 (8)
7	08:51	08:09	07:06	06:47	05:38	19:59 (12) 04:53 20:39 (9)
	16:18	17:16	18:14	20:15	21:13	25 20:24 (12) 22:01 31 21:10 (8)
8	08:50	08:07	07:03	06:45	05:36	19:59 (12) 04:52 20:39 (9)
	16:19	17:18	18:16	20:17	21:15	24 20:23 (12) 22:02 31 21:10 (8)
9	08:49	08:05	07:01	06:42	05:34	20:00 (12) 04:52 20:40 (9)
	16:21	17:20	18:18	20:19	21:17	22 20:22 (12) 22:03 30 21:10 (8)
10	08:49	08:03	06:58	06:40	05:32	20:01 (12) 04:51 20:39 (9)
	16:22	17:23	18:20	20:21	21:18	22 20:23 (12) 22:04 31 21:10 (8)
11	08:48	08:01	06:56	06:37	05:30	20:02 (12) 04:51 20:40 (9)
	16:24	17:25	18:22	20:23	21:20	19 20:21 (12) 22:05 30 21:10 (8)
12	08:47	07:59	06:53	06:35	05:28	20:02 (12) 04:50 20:40 (9)
	16:26	17:27	18:24	20:25	21:22	18 20:20 (12) 22:06 30 21:10 (8)
13	08:46	07:57	06:51	06:32	05:26	20:03 (12) 04:50 20:41 (9)
	16:27	17:29	18:26	20:27	21:24	16 20:19 (12) 22:07 30 21:11 (8)
14	08:45	07:55	06:48	06:30	05:24	20:06 (12) 04:49 20:40 (9)
	16:29	17:31	18:28	20:29	21:26	12 20:18 (12) 22:07 30 21:10 (8)
15	08:44	07:52	06:46	06:28	05:22	20:08 (12) 04:49 20:40 (9)
	16:31	17:33	18:30	20:30	21:28	7 20:15 (12) 22:08 30 21:10 (8)
16	08:43	07:50	06:43	06:25	05:21	04:49 20:41 (9)
	16:32	17:35	18:32	20:32	21:29	22:08 30 21:11 (8)
17	08:42	07:48	06:41	06:23	05:19	04:49 20:41 (9)
	16:34	17:37	18:34	20:34	21:31	22:09 30 21:11 (8)
18	08:41	07:46	06:38	06:20	05:17	04:49 20:41 (9)
	16:36	17:39	18:36	20:36	21:33	22:09 30 21:11 (8)
19	08:40	07:44	06:35	06:18	05:16	20:53 (8) 04:49 20:41 (9)
	16:38	17:41	18:38	20:38	21:34	7 21:00 (8) 22:10 30 21:11 (8)
20	08:39	07:41	06:33	06:15	05:14	20:51 (8) 04:49 20:41 (9)
	16:40	17:43	18:40	20:40	21:36	11 21:02 (8) 22:10 30 21:11 (8)
21	08:37	07:39	06:30	06:13	05:12	20:47 (9) 04:49 20:41 (9)
	16:42	17:46	18:42	20:42	21:38	16 21:03 (8) 22:10 30 21:11 (8)
22	08:36	07:37	06:28	06:11	05:11	20:45 (9) 04:49 20:42 (9)
	16:44	17:48	18:44	20:44	21:39	19 21:04 (8) 22:11 30 21:12 (8)
23	08:35	07:34	06:25	06:08	05:09	20:44 (9) 04:49 20:42 (9)
	16:45	17:50	18:46	20:46	21:41	22 21:06 (8) 22:11 30 21:12 (8)
24	08:33	07:32	06:23	06:06	05:08	20:42 (9) 04:50 20:42 (9)
	16:47	17:52	18:48	20:48	21:43	24 21:06 (8) 22:11 30 21:12 (8)
25	08:32	07:30	06:20	06:04	05:07	20:42 (9) 04:50 20:43 (9)
	16:49	17:54	18:50	20:50	21:44	24 21:06 (8) 22:11 30 21:13 (8)
26	08:30	07:27	06:18	06:02	05:05	20:41 (9) 04:50 20:43 (9)
	16:51	17:56	18:52	20:52	21:46	26 21:07 (8) 22:11 30 21:13 (8)
27	08:29	07:25	06:15	05:59	05:04	20:41 (9) 04:51 20:44 (9)
	16:53	17:58	18:54	20:54	21:47	27 21:08 (8) 22:11 29 21:13 (8)
28	08:27	07:23	06:13	05:57	05:03	20:40 (9) 04:51 20:43 (9)
	16:55	18:00	18:56	20:56	21:49	28 21:08 (8) 22:11 30 21:13 (8)
29	08:25		07:10	05:55	05:01	20:40 (9) 04:52 20:44 (9)
	16:57		19:57	20:58	21:50	28 21:08 (8) 22:10 30 21:14 (8)
30	08:24		07:07	05:53	05:00	20:40 (9) 04:53 20:43 (9)
	17:00		19:59	21:00	21:52	29 21:09 (8) 22:10 31 21:14 (8)
31	08:22		07:05		04:59	20:39 (9)
	17:02		20:01		21:53	30 21:09 (8)
Potential sun hours	244	270	366	422	499	517
Total, worst case				137	609	904
Sun reduction				0,39	0,52	0,48
Oper. time red.				1,00	1,00	1,00
Wind dir. red.				0,96	0,92	0,87
Total reduction				0,38	0,47	0,42
Total, real				52	289	382

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
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+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar

Calculation: Suplanuotos kitais projektai Shadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:53	20:44 (9)	05:35	20:12 (12)	06:33	07:29	07:30	08:27
	22:10	21:14 (8)	21:32	20:31 (12)	20:23	19:06	16:53	16:06
2	04:54	20:44 (9)	05:37	20:12 (12)	06:34	07:30	07:32	08:29
	22:09	21:15 (8)	21:30	20:32 (12)	20:20	19:04	16:51	16:05
3	04:55	20:45 (9)	05:39	20:11 (12)	06:36	07:32	07:34	08:30
	22:09	21:15 (8)	21:28	20:33 (12)	20:18	19:01	16:49	16:04
4	04:56	20:44 (9)	05:41	20:10 (12)	06:38	07:34	07:36	08:32
	22:08	21:15 (8)	21:26	20:33 (12)	20:15	18:59	16:47	16:04
5	04:57	20:45 (9)	05:43	20:10 (12)	06:40	07:36	07:38	08:33
	22:08	21:15 (8)	21:24	20:34 (12)	20:13	18:56	16:45	16:03
6	04:58	20:45 (9)	05:44	20:09 (12)	06:42	07:38	07:40	08:35
	22:07	21:16 (8)	21:22	20:34 (12)	20:10	18:54	16:43	16:02
7	04:59	20:45 (9)	05:46	20:08 (12)	06:44	07:40	07:42	08:36
	22:06	21:16 (8)	21:20	20:34 (12)	20:08	18:51	16:41	16:02
8	05:00	20:46 (9)	05:48	20:08 (12)	06:46	07:42	07:44	08:38
	22:06	21:16 (8)	21:18	20:34 (12)	20:05	18:49	16:39	16:01
9	05:01	20:46 (9)	05:50	20:09 (12)	06:47	07:44	07:46	08:39
	22:05	21:16 (8)	21:16	20:34 (12)	20:03	18:46	16:37	16:01
10	05:02	20:46 (9)	05:52	20:08 (12)	06:49	07:46	07:48	08:40
	22:04	21:16 (8)	21:14	20:33 (12)	20:00	18:44	16:35	16:01
11	05:03	20:46 (9)	05:54	20:08 (12)	06:51	07:48	07:50	08:41
	22:03	21:16 (8)	21:12	20:33 (12)	19:58	18:41	16:33	16:00
12	05:04	20:48 (9)	05:55	20:09 (12)	06:53	07:50	07:52	08:42
	22:02	21:17 (8)	21:10	20:33 (12)	19:55	18:39	16:32	16:00
13	05:06	20:48 (9)	05:57	20:09 (12)	06:55	07:52	07:54	08:44
	22:01	21:17 (8)	21:08	20:33 (12)	19:52	18:36	16:30	16:00
14	05:07	20:48 (9)	05:59	20:09 (12)	06:57	07:54	07:56	08:45
	22:00	21:17 (8)	21:05	20:32 (11)	19:50	18:34	16:28	16:00
15	05:08	20:49 (9)	06:01	20:10 (12)	06:59	07:56	07:58	08:46
	21:59	21:17 (8)	21:03	20:32 (11)	19:47	18:32	16:27	16:00
16	05:10	20:50 (9)	06:03	20:11 (12)	07:00	07:57	08:00	08:47
	21:57	21:17 (8)	21:01	20:31 (11)	19:45	18:29	16:25	16:00
17	05:11	20:50 (9)	06:05	20:11 (12)	07:02	07:59	08:02	08:47
	21:56	21:17 (8)	20:59	20:28 (11)	19:42	18:27	16:23	16:00
18	05:13	20:51 (9)	06:06	20:13 (11)	07:04	08:01	08:04	08:48
	21:55	21:16 (8)	20:56	20:26 (11)	19:40	18:24	16:22	16:00
19	05:14	20:52 (9)	06:08	20:15 (11)	07:06	08:03	08:06	08:49
	21:54	21:16 (8)	20:54	20:24 (11)	19:37	18:22	16:20	16:01
20	05:16	20:53 (9)	06:10	20:17 (11)	07:08	08:05	08:08	08:50
	21:52	21:16 (8)	20:52	20:22 (11)	19:35	18:20	16:19	16:01
21	05:17	20:54 (9)	06:12		07:10	08:07	08:10	08:50
	21:51	21:15 (8)	20:49		19:32	18:17	16:17	16:01
22	05:19	20:56 (9)	06:14		07:12	08:09	08:11	08:51
	21:49	21:14 (8)	20:47		19:29	18:15	16:16	16:02
23	05:20	20:59 (9)	06:16		07:14	08:11	08:13	08:51
	21:48	21:13 (8)	20:45		19:27	18:13	16:15	16:02
24	05:22	21:02 (8)	06:18		07:15	08:13	08:15	08:52
	21:46	21:12 (8)	20:42		19:24	18:10	16:13	16:03
25	05:23	21:05 (8)	06:20		07:17	07:15	08:17	08:52
	21:45	21:08 (8)	20:40		19:22	17:08	16:12	16:03
26	05:25		06:21		07:19	07:17	08:19	08:52
	21:43		20:37		19:19	17:06	16:11	16:04
27	05:27		06:23		07:21	07:19	08:20	08:53
	21:41		20:35		19:17	17:04	16:10	16:05
28	05:28		06:25		07:23	07:21	08:22	08:53
	21:39		20:33		19:14	17:02	16:09	16:06
29	05:30	20:17 (12)	06:27		07:25	07:24	08:24	08:53
	21:38	9 20:26 (12)	20:30		19:11	16:59	16:08	16:07
30	05:32	20:15 (12)	06:29		07:27	07:26	08:26	08:53
	21:36	14 20:29 (12)	20:28		19:09	16:57	16:07	16:08
31	05:34	20:14 (12)	06:31			07:28		08:53
	21:34	17 20:31 (12)	20:25			16:55		16:09
Potential sun hours	519		464		383	327	254	227
Total, worst case	681		417					
Sun reduction	0,49		0,52					
Oper. time red.	1,00		1,00					
Wind dir. red.	0,88		0,96					
Total reduction	0,43		0,49					
Total, real	291		206					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar

Calculation: Suplanuotos kitais projektais Shadow receptor: I - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	07:34 16:49	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:54 21:58	04:55 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	07:38 16:45	08:34 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:46 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:42	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:56 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:24	08:47 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	07:16 17:08	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:18 17:06	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:20 17:04	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	07:22 17:02	08:22 16:09	08:53 16:06
29	08:26 16:58	07:20 19:58	06:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	07:24 17:00	08:24 16:08	08:53 16:07
30	08:24 17:00	07:18 20:00	06:08 21:00	05:53 21:52	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	07:26 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02	07:15 20:01	06:05 21:01	05:51 21:53	05:00 21:53	04:54 22:10	05:34 21:34	06:31 20:25	07:28 16:55	07:28 16:55	08:27 16:07	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar

Calculation: Suplanuotos kitais projektai Shadow receptor: J - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1-31). Each cell contains start and end times for shadow calculations. Summary rows at the bottom show potential sun hours, total reduction, and real total.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suplanuotos kitais projektais Shadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53	08:20	07:20	07:03	05:51	04:58	04:54	05:28 (9)	05:36	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	11 05:39 (9)	21:32	20:23	19:07	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:29 (9)	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	10 05:39 (9)	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:58	05:46	04:56	04:55	05:30 (9)	05:39	06:37	07:33	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	9 05:39 (9)	21:29	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:31 (9)	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	8 05:39 (9)	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:55	04:57	05:32 (9)	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	6 05:38 (9)	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:32 (9)	05:45	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	4 05:36 (9)	21:23	20:10	18:54	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	05:26 (9)	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	5 05:31 (9)	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:26 (9)	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	7 05:33 (9)	22:06	21:18	20:05	18:49	16:39	16:02
9	08:50	08:05	07:01	06:42	05:34	04:52	05:25 (9)	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:21	18:18	20:19	21:17	22:03	9 05:34 (9)	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:25 (9)	05:02	05:52	06:50	07:46	07:48	08:40
	16:23	17:23	18:20	20:21	21:19	22:04	10 05:35 (9)	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:24 (9)	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	11 05:35 (9)	22:03	21:12	19:58	18:42	16:34	16:01
12	08:47	07:59	06:53	06:35	05:28	04:50	05:24 (9)	05:05	05:56	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	12 05:36 (9)	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:33	05:26	04:50	05:24 (9)	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	13 05:37 (9)	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:50	05:24 (9)	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	13 05:37 (9)	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:23 (9)	05:09	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	14 05:37 (9)	21:59	21:03	19:48	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:23 (9)	05:10	06:03	07:01	07:58	08:00	08:47
	16:33	17:35	18:32	20:33	21:29	22:09	14 05:37 (9)	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:23 (9)	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:35	21:31	22:09	15 05:38 (9)	21:56	20:59	19:42	18:27	16:24	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:23 (9)	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	15 05:38 (9)	21:55	20:57	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:23 (9)	05:14	06:09	07:06	08:04	08:06	08:49
	16:38	17:42	18:38	20:38	21:35	22:10	15 05:38 (9)	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:42	06:33	06:16	05:14	04:49	05:23 (9)	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	15 05:38 (9)	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:31	06:13	05:13	04:49	05:24 (9)	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	15 05:39 (9)	21:51	20:50	19:32	18:18	16:18	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:24 (9)	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	15 05:39 (9)	21:49	20:47	19:30	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:50	05:24 (9)	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	15 05:39 (9)	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:25 (9)	05:22	06:18	07:16	08:14	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	15 05:40 (9)	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:25 (9)	05:24	06:20	07:17	07:16	08:17	08:52
	16:50	17:54	18:50	20:50	21:44	22:11	15 05:40 (9)	21:45	20:40	19:22	17:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:51	05:25 (9)	05:25	06:22	07:19	07:18	08:19	08:52
	16:52	17:56	18:52	20:52	21:46	22:11	14 05:39 (9)	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:26 (9)	05:27	06:23	07:21	07:20	08:21	08:53
	16:54	17:58	18:54	20:54	21:47	22:11	14 05:40 (9)	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:52	05:26 (9)	05:29	06:25	07:23	07:22	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	13 05:39 (9)	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:02	04:52	05:27 (9)	05:30	06:27	07:25	07:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	13 05:40 (9)	21:38	20:30	19:12	17:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:28 (9)	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		20:00	21:00	21:52	22:10	12 05:40 (9)	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59			05:34	06:31		07:28		08:53
	17:02		20:01		21:53			21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383		327	254	227
Total, worst case							309				48		
Sun reduction							0,48				0,49		
Oper. time red.							1,00				1,00		
Wind dir. red.							0,77				0,77		
Total reduction							0,38				0,38		
Total, real							116				18		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
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Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar

Calculation: Suplanuotos kitais projektai Shadow receptor: L - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:54 22:10	05:29 (12) 05:40 (12)	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:30 (12) 05:40 (12)	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:31 (12) 05:39 (12)	05:39 21:29	06:37 20:18	07:33 19:01	07:34 16:49
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:33 (12) 05:38 (12)	05:41 21:27	06:38 20:15	07:34 18:59	07:36 16:47
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:33 (12) 21:25	05:43 20:13	06:40 18:56	07:36 16:45	07:38 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:35 (12) 05:45 (12)	05:46 21:21	06:44 20:08	07:40 18:51	07:42 16:41
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:30 (12) 05:31 (12)	05:48 21:18	06:46 20:05	07:42 18:49	07:44 16:39
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:27 (12) 05:33 (12)	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:19	04:51 22:04	05:02 22:04	05:26 (12) 05:35 (12)	05:52 21:14	06:50 20:00	07:46 18:44	07:48 16:35
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:25 (12) 05:35 (12)	05:54 21:12	06:51 19:58	07:48 18:42	07:50 16:34
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:38 (12) 05:37 (12)	05:56 21:10	06:53 19:55	07:50 18:39	07:52 16:32
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:25 (12) 05:37 (12)	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:25 (12) 05:38 (12)	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:09 21:59	05:24 (12) 05:38 (12)	06:01 21:03	06:59 19:48	07:56 18:32	07:58 16:27
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	05:24 (12) 05:39 (12)	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:35	05:19 21:31	04:49 22:09	05:11 21:56	05:24 (12) 05:39 (12)	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:24
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	05:24 (12) 05:39 (12)	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	05:24 (12) 05:40 (12)	06:09 20:54	07:06 19:37	08:04 18:22	08:06 16:20
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	05:24 (12) 05:40 (12)	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	05:25 (12) 05:41 (12)	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	05:25 (12) 05:41 (12)	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:50 22:11	05:20 21:48	05:25 (12) 05:41 (12)	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	05:26 (12) 05:42 (12)	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	05:26 (12) 05:41 (12)	06:20 20:40	07:17 19:22	07:16 17:08	08:17 16:12
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	05:26 (12) 05:41 (12)	06:22 20:38	07:19 19:19	07:18 17:06	08:19 16:11
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	05:27 (12) 05:41 (12)	06:23 20:35	07:21 19:17	07:20 17:04	08:21 16:10
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	05:27 (12) 05:41 (12)	06:25 20:33	07:23 19:14	07:22 17:02	08:22 16:09
29	08:26 16:58	07:10 19:58	07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	05:28 (12) 05:41 (12)	06:27 20:30	07:25 19:12	07:24 17:00	08:24 16:08
30	08:24 17:00	07:08 20:00	05:53 21:00	05:00 21:52	04:53 21:52	04:53 22:10	05:32 21:36	05:29 (12) 05:41 (12)	06:29 20:28	07:27 19:09	07:26 16:57	08:26 16:07
31	08:22 17:02	07:05 20:01	05:51 21:01	05:04 21:53	04:59 21:53	04:59 21:53	05:34 21:34	05:34 21:34	06:31 20:25	07:28 16:55	07:28 16:55	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case						301						34
Sun reduction						0,48						0,49
Oper. time red.						1,00						1,00
Wind dir. red.						0,77						0,77
Total reduction						0,37						0,38
Total, real						113						13

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar

Calculation: Suplanuotos kitais projektais Shadow receptor: M - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:02 20:03	05:51 21:01	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:06	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:15 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:28	06:36 20:18	07:32 19:01	07:34 16:49	08:30 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:54 21:58	04:55 22:08	05:41 21:26	06:38 20:15	07:34 18:59	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:24	06:40 20:13	07:36 18:56	07:38 16:45	08:33 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:44 21:22	06:42 20:10	07:38 18:54	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:20	06:44 20:08	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	07:44 16:39	08:38 16:02
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12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:55 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:42 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00
14	08:45 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:05	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
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22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:39	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:29	08:09 18:15	08:11 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:11 18:13	08:13 16:15	08:51 16:02
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25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	07:15 17:08	08:17 16:12	08:52 16:04
26	08:30 16:52	07:27 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:17 17:06	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:20 17:04	08:20 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:39	06:25 20:33	07:23 19:14	07:22 17:02	08:22 16:09	08:53 16:06
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30	08:24 17:00	07:19 19:59	06:09 21:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	07:26 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02	07:17 20:01	06:05 20:01	05:51 21:53	05:00 21:53	04:52 21:53	05:34 21:34	06:31 20:25	07:28 16:55	07:28 16:55	08:27 16:55	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

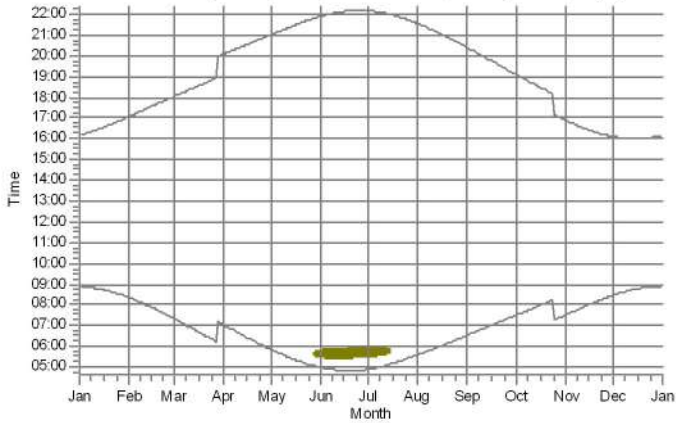
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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

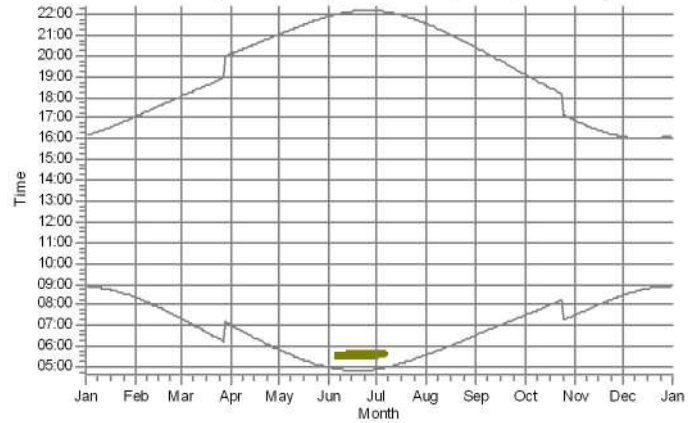
SHADOW - Calendar, graphical

Calculation: Suplanuotos kitais projektais

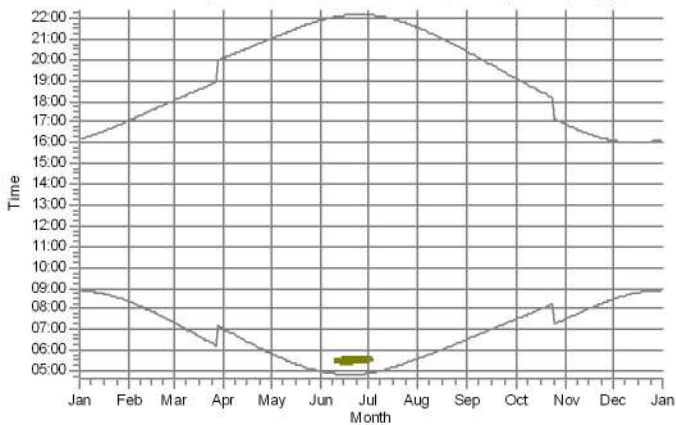
A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)



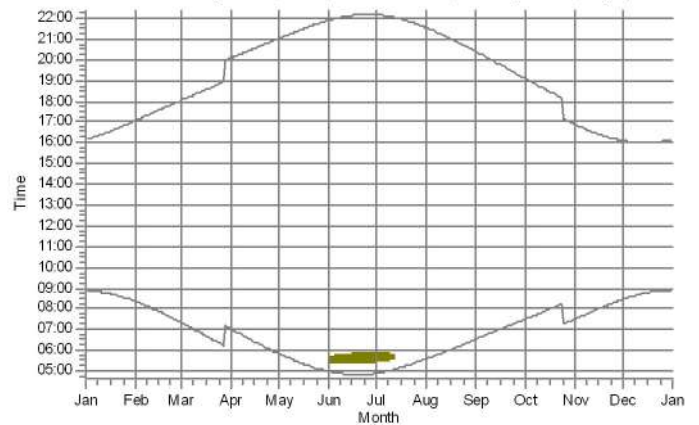
B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)



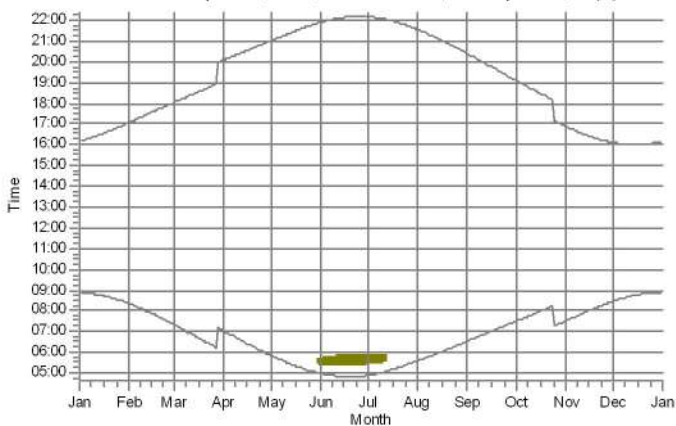
C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)



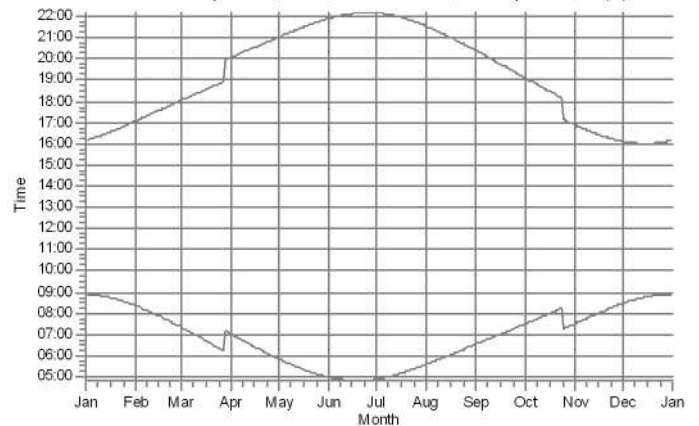
D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)



E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)



F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)



WTGs

10: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (11)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

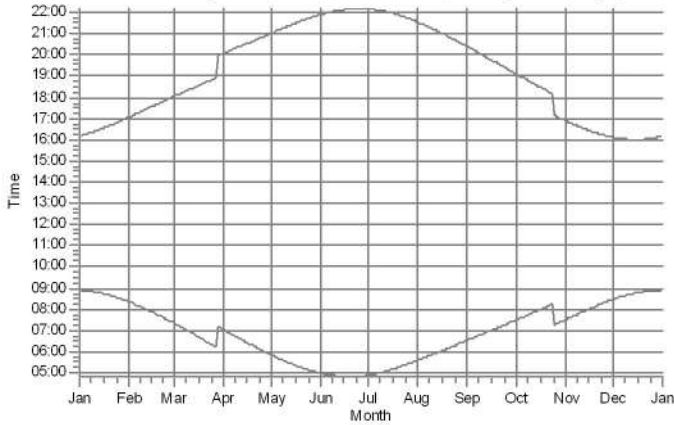
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Calculated:
2021.06.16 10:47/3.4.415

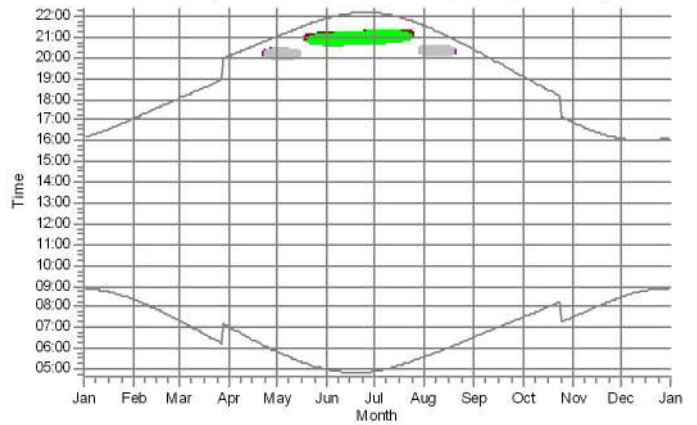
SHADOW - Calendar, graphical

Calculation: Suplanuotos kitais projektais

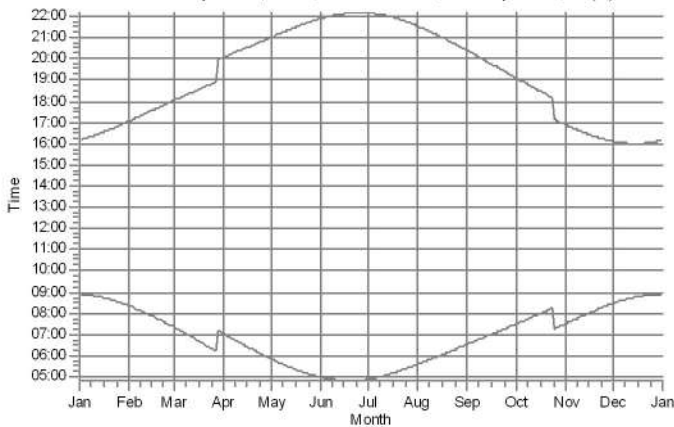
G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)



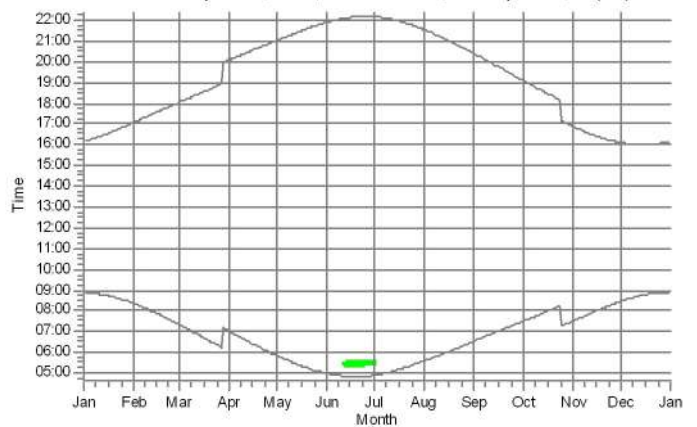
H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)



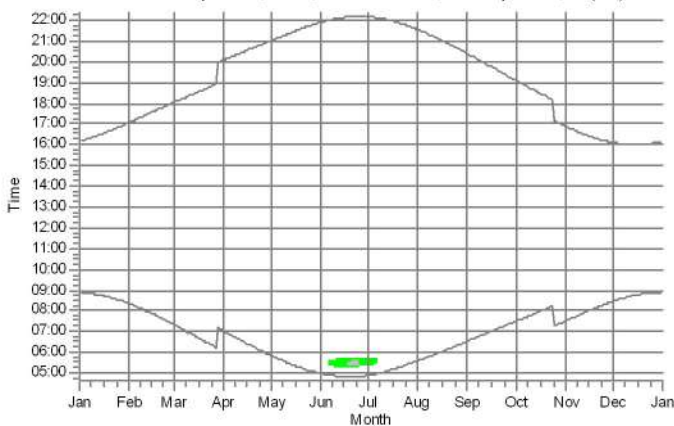
I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)



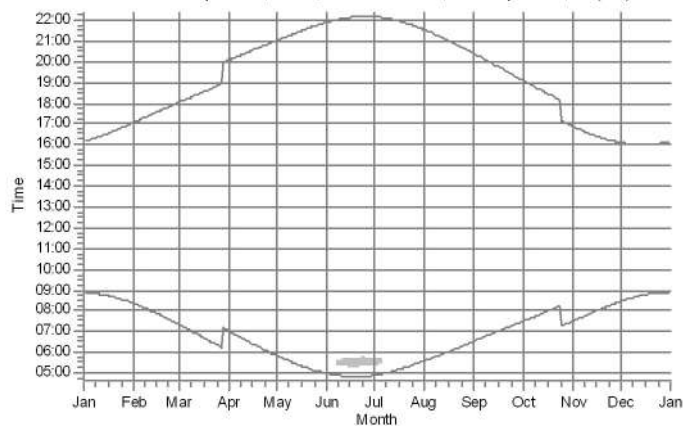
J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)



K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)



L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)



WTGs

- 8: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (9)
- 9: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (10)

- 11: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (12)
- 12: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (13)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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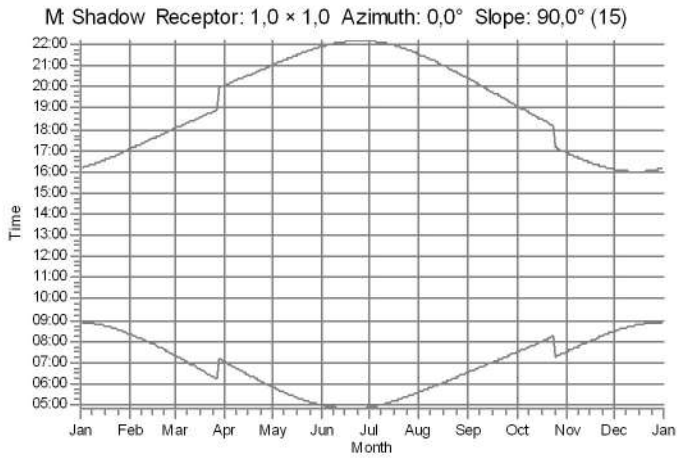
Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

2021.06.16 10:47/3.4.415

SHADOW - Calendar, graphical

Calculation: Suplanuotos kitais projektais



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar per WTG

Calculation: Suplanuotos kitais projektais WTG: 1 - NORDEX N149/4.0-4.5 4500 149.0 !OI! hub: 165,0 m (TOT: 239,5 m) (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 13 columns (January to December) and 31 rows (1 to 31). Each cell contains a time range (Sun rise to Sun set) for a specific day. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

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+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar per WTG

Calculation: Suplanuotos kitais projektai: WTG: 2 - NORDEX N149/4.0-4.5 4500 149.0 !OI hub: 165,0 m (TOT: 239,5 m) (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 13 columns (January to December) and 31 rows (1 to 31). Columns contain time intervals (Sun rise, Sun set) for each day. Includes summary rows for 'Potential sun hours' and 'Sum of minutes with flicker'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



SHADOW - Calendar per WTG

Calculation: Suplanuotos kitais projektais WTG: 3 - NORDEX N149/4.0-4.5 4500 149.0 !OI! hub: 165,0 m (TOT: 239,5 m) (4)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
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19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
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20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
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21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:10	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suplanuotos kitais projektai: WTG: 4 - NORDEX N149/4.0-4.5 4500 149.0 !OI! hub: 165,0 m (TOT: 239,5 m) (5)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:18	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:10	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilë / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar per WTG

Calculation: Suplanuotos kitais projektais WTG: 5 - NORDEX N149/4.0-4.5 4500 149.0 !OI! hub: 165,0 m (TOT: 239,5 m) (6)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:02 20:03	05:50 21:02	04:58 21:54	04:53 22:10	05:35 21:32	06:33 20:23	07:29 19:06	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:32 19:01	07:34 16:49	08:31 16:04
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:54 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	07:38 16:45	08:34 16:03
6	08:51 16:16	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:44 21:23	06:42 20:10	07:38 18:54	07:40 16:43	08:35 16:02
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	07:44 16:39	08:38 16:01
9	08:50 16:21	08:05 17:20	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:22	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:46 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:41	07:50 16:33	08:41 16:00
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:04 22:02	05:55 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:32 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:49 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:08 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27	08:46 16:00
16	08:44 16:32	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:23	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:24	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:41	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:08 20:54	07:06 19:37	08:04 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:30 18:42	06:13 20:42	05:12 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:17	08:10 16:17	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:29	08:10 18:15	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:08 20:46	05:09 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:51 16:02
24	08:33 16:47	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:15 19:24	08:14 18:11	08:15 16:13	08:52 16:03
25	08:32 16:49	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	08:17 17:08	08:19 16:12	08:52 16:04
26	08:30 16:51	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:50 22:11	05:25 21:43	06:21 20:38	07:19 19:19	08:18 17:06	08:19 16:11	08:53 16:04
27	08:29 16:53	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:21 17:04	08:21 16:10	08:53 16:05
28	08:27 16:55	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:51 22:11	05:29 21:40	06:25 20:33	07:23 19:14	08:23 17:02	08:22 16:09	08:53 16:06
29	08:26 16:58	07:10 17:58	06:10 19:58	05:55 20:58	05:01 21:50	04:52 22:11	05:30 21:38	06:27 20:30	07:25 19:12	08:24 16:59	08:24 16:08	08:53 16:07
30	08:24 17:00	07:08 19:59	06:10 19:59	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	08:26 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02	07:05 20:01	06:10 20:01	05:59 21:00	05:04 21:53	04:59 22:10	05:34 21:34	06:31 20:25	07:28 16:55	08:27 16:55	08:27 16:09	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
 K. Donelaicio str. 55-2
 LT-44245 Kaunas
 +370 37 407548
 Raminta Survilè / r.survile@infraplanas.lt
 Calculated:
 2021.06.16 10:47/3.4.415

SHADOW - Calendar per WTG

Calculation: Suplanuotos kitais projekttais WTG: 6 - NORDEX N149/4.0-4.5 4500 149.0 !OI hub: 165,0 m (TOT: 239,5 m) (7)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:53 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:32 19:01	07:34 16:49	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:54 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	07:38 16:45	08:34 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:44 21:23	06:42 20:10	07:38 18:54	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:19	06:46 20:05	07:42 18:49	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:22	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:46 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:41	07:50 16:34	08:41 16:00
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:55 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:43 16:00
13	08:47 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:49 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:08 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27	08:46 16:00
16	08:44 16:32	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:35	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:23	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:41	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:08 20:54	07:06 19:37	08:04 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	07:16 17:08	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:50 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:18 17:06	08:19 16:11	08:53 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:20 17:04	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	07:22 17:02	08:22 16:09	08:53 16:06
29	08:26 16:58		07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:11	05:30 21:38	06:27 20:30	07:25 19:12	07:24 17:00	08:24 16:08	08:53 16:07
30	08:24 17:00		07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	07:26 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02		07:05 20:01		04:59 21:53		05:34 21:34	06:31 20:25		07:28 16:55		08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



SHADOW - Calendar per WTG

Calculation: Suplanuotos kitais projektai: WTG: 7 - NORDEX N149/4.0-4.5 4500 149.0 !OI hub: 165,0 m (TOT: 239,5 m) (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Table with 12 columns (Jan-Dec) and 1 row of values: 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time

Table with 3 columns (0, 1, Sum) and 1 row of values: 4.380 4.380 8.760

Main shadow calculation table with columns for months (January-December) and rows for each day (1-31), showing sun rise/set times and minutes with flicker.

Table layout: For each day in each month the following matrix apply

Matrix defining columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), First time (hh:mm) with flicker, Last time (hh:mm) with flicker, Minutes with flicker.



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar per WTG

Calculation: Suplanuotos kitais projektaisWTG: 8 - NORDEX N149/4.0-4.5 4500 149.0 !OI! hub: 165,0 m (TOT: 239,5 m) (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 matrix of times (Sun rise, Sun set, First time with flicker, Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each month's data.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
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SHADOW - Calendar per WTG

Calculation: Suplanuotos kitais projektais WTG: 9 - NORDEX N149/4.0-4.5 4500 149.0 !OI! hub: 165,0 m (TOT: 239,5 m) (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 13 columns (January to December) and 31 rows (Day 1 to Day 31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each column.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
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SHADOW - Calendar per WTG

Calculation: Suplanuotos kitais projektaisWTG: 10 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (11)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' at the bottom.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar per WTG

Calculation: Suplanuotos kitais projektai: WTG: 11 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (TOT: 240,0 m) (12)
Assumptions for shadow calculations

Shine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day (1-31) showing sun rise and set times and minutes with flicker.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 10:47/3.4.415

SHADOW - Calendar per WTG

Calculation: Suplanuotos kitais projektai: WTG: 12 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (TOT: 240,0 m) (13)
Assumptions for shadow calculations
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day (1-31), showing sun rise/set times and operational status (0/1) for each hour.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

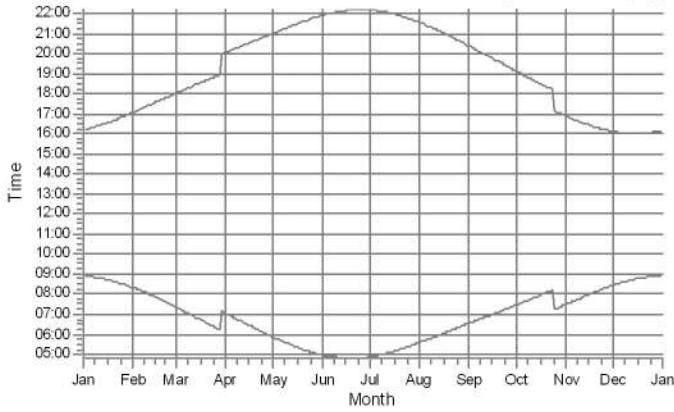
Licensed user:

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Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 10:47/3.4.415

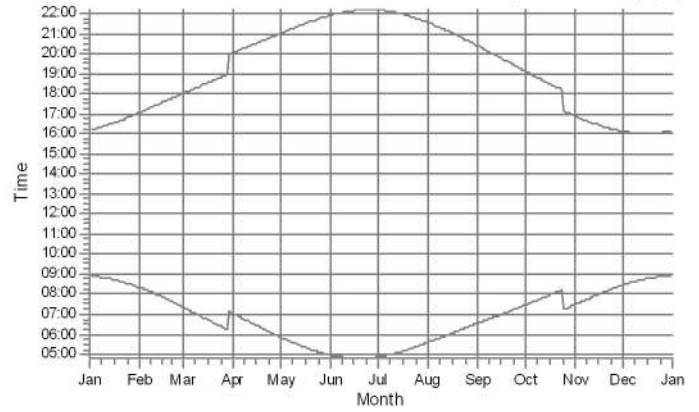
SHADOW - Calendar per WTG, graphical

Calculation: Suplanuotos kitais projektais

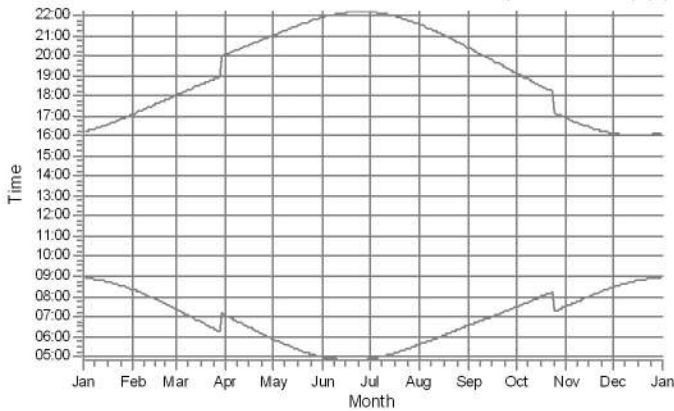
1: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (2)



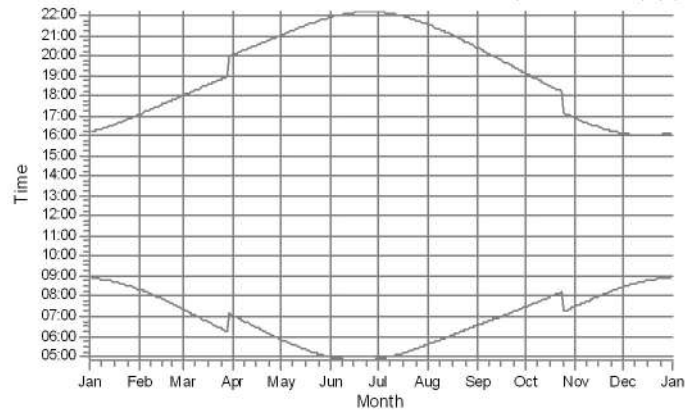
2: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (3)



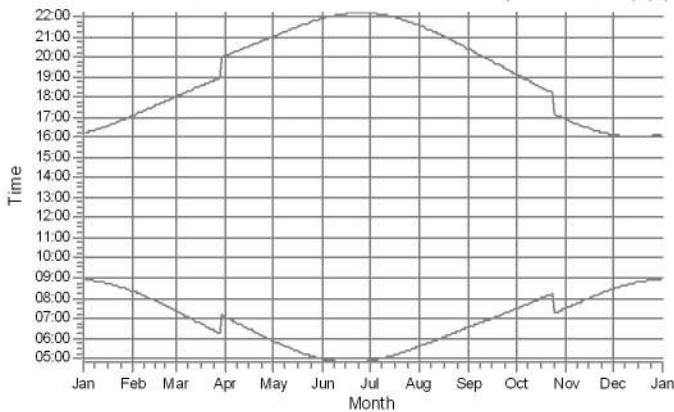
3: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (4)



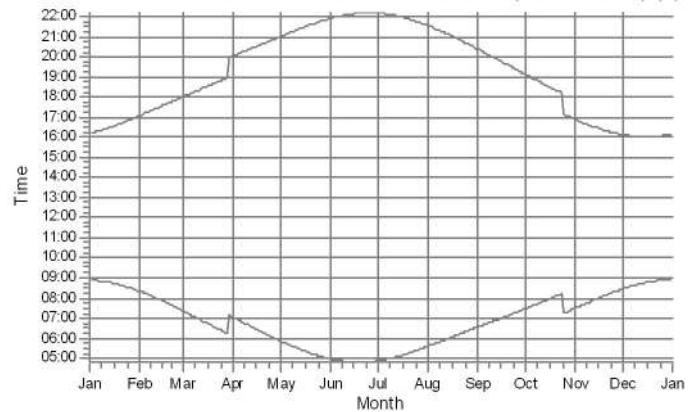
4: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (5)



5: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (6)



6: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (7)



Shadow receptors

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

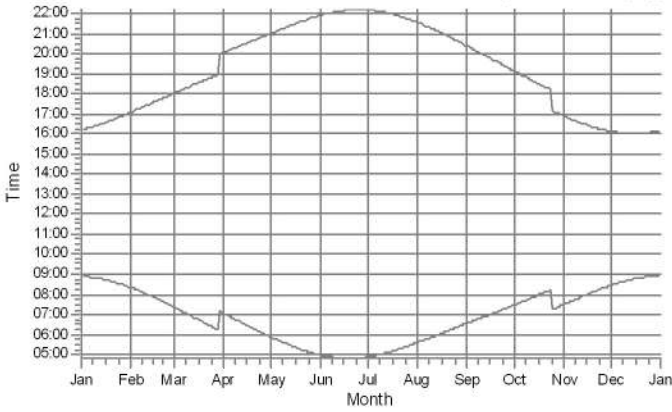
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Calculated:
2021.06.16 10:47/3.4.415

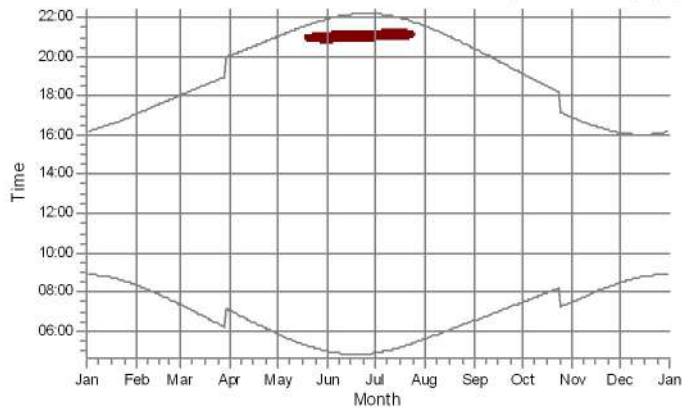
SHADOW - Calendar per WTG, graphical

Calculation: Suplanuotos kitais projektais

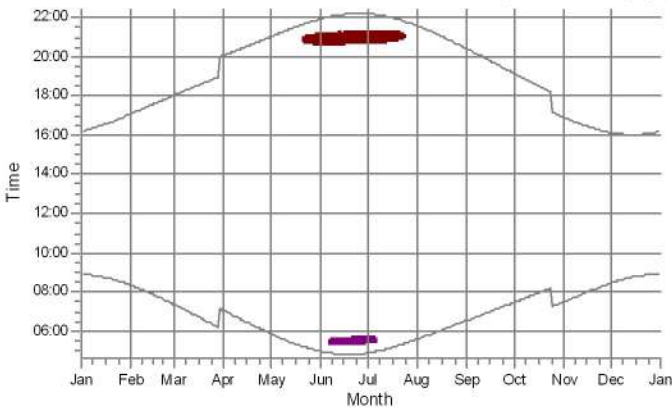
7: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (8)



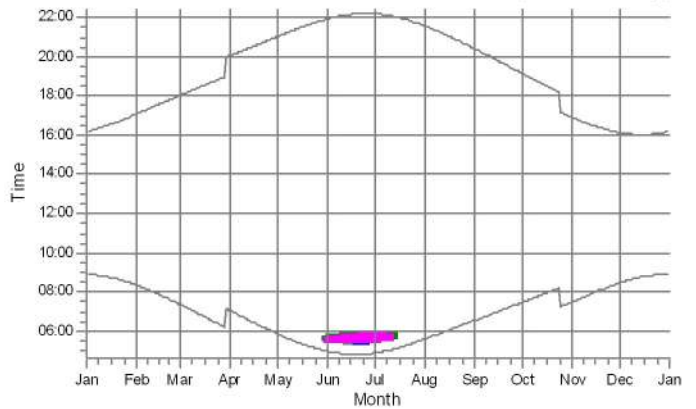
8: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (9)



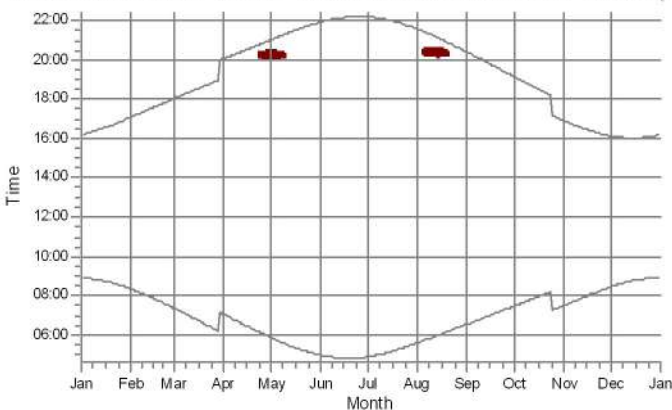
9: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (10)



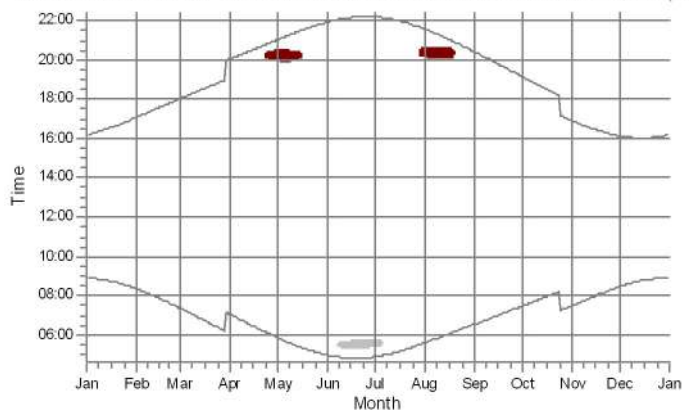
10: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (11)



11: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



12: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



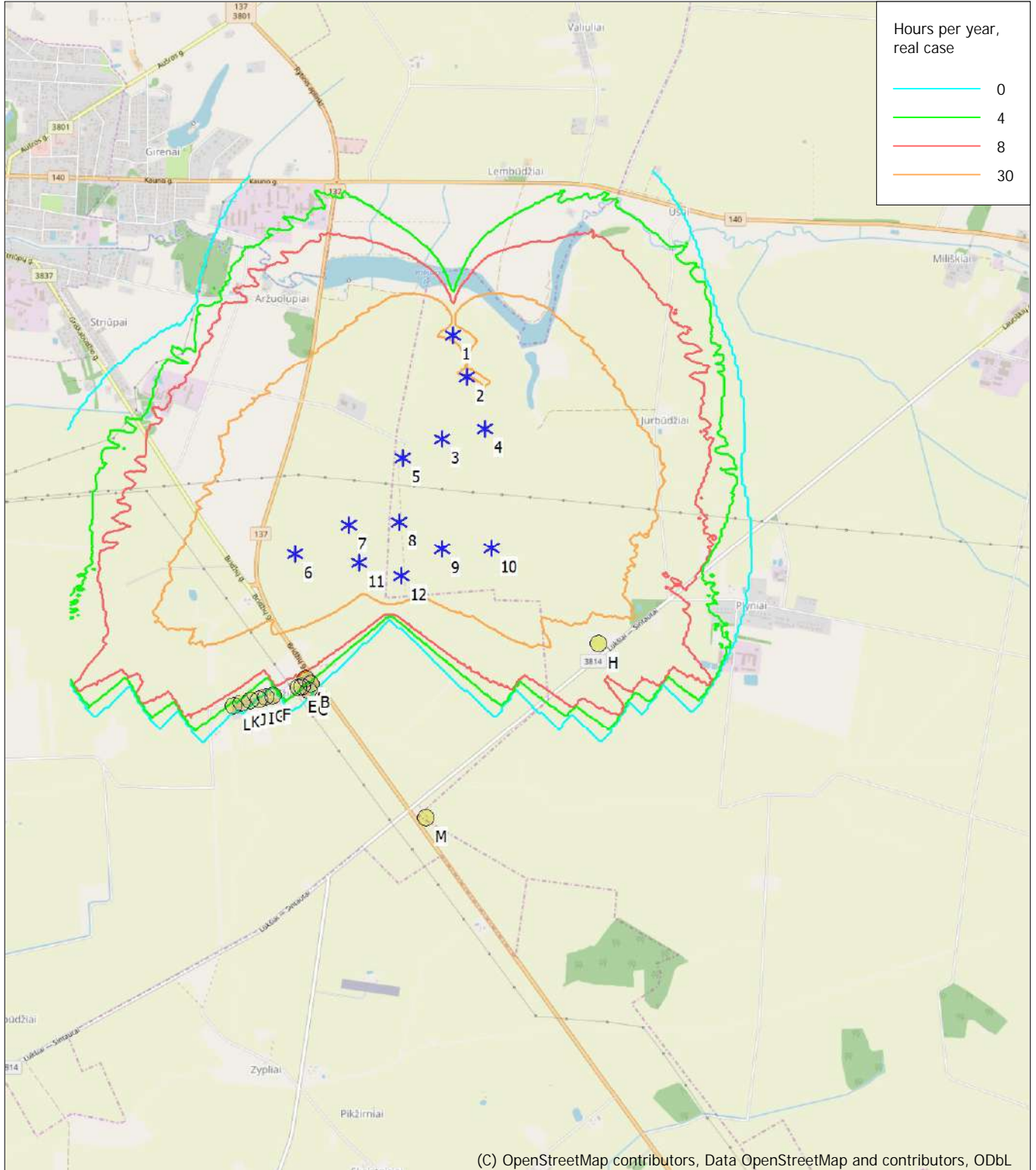
Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)

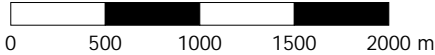
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

SHADOW - Map

Calculation: Suplanuotos kitais projektais



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL



Map: EMD OpenStreetMap , Print scale 1:40.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 442.440 North: 6.088.240

* Existing WTG 🌞 Shadow receptor

Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Main Result

Calculation: Suminis poveikis Enercon E66
Assumptions for shadow calculations

Maximum distance for influence
Calculate only when more than 20 % of sun is covered by the blade
Please look in WTG table

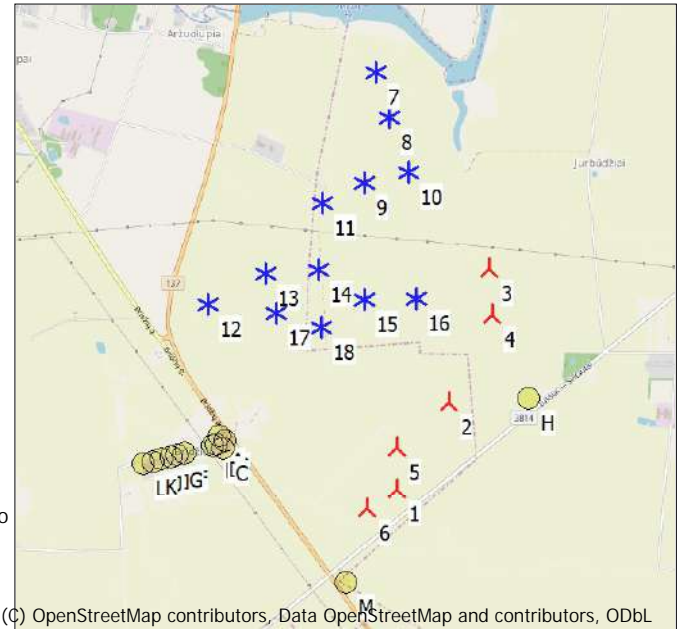
Minimum sun height over horizon for influence 3 °
Day step for calculation 1 days
Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo
Obstacles used in calculation
Eye height for map: 1,5 m
Grid resolution: 1,0 m

All coordinates are in
Lithuanian TM LKS94-LKS94 (LT)



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL

Scale 1:50.000
New WTG Existing WTG Shadow receptor

WTGs

Y	X	Z	Row data/Description	WTG type		Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
				Valid	Manufact.					Calculation distance [m]	RPM
1	442.261	6.087.347	50,0 ENERCON E-66/20.70...No	Yes	ENERCON	E-66/20.70-2.000	2.000	70,0	85,0	2.500	22,0
2	442.609	6.087.922	50,0 ENERCON E-66/20.70...No	Yes	ENERCON	E-66/20.70-2.000	2.000	70,0	85,0	2.500	22,0
3	442.891	6.088.803	50,3 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
4	442.908	6.088.497	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
5	442.265	6.087.626	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
6	442.058	6.087.221	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
7	442.152	6.090.108	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
8	442.241	6.089.811	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
9	442.064	6.089.378	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
10	442.365	6.089.446	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
11	441.791	6.089.249	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
12	441.022	6.088.592	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
13	441.405	6.088.791	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
14	441.755	6.088.807	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
15	442.055	6.088.609	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
16	442.405	6.088.612	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
17	441.469	6.088.526	50,0 GE WIND ENERGY 5....Yes	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0
18	441.767	6.088.429	50,0 GE WIND ENERGY 5....Yes	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0

Shadow receptor-Input

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

To be continued on next page...

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Main Result

Calculation: Suminis poveikis Enercon E66

...continued from previous page

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Calculation Results

Shadow receptor

Shadow, expected values

No. Shadow hours

per year

[h/year]

A	9:19
B	6:57
C	5:38
D	7:47
E	8:05
F	2:08
G	1:53
H	29:12
I	1:40
J	2:05
K	3:07
L	2:49
M	0:00

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Expected [h/year]
1	ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)	13:26	3:43
2	ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)	18:41	7:25
3	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)	0:00	0:00
4	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)	0:00	0:00
5	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)	14:21	4:46
6	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)	18:05	4:43
7	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)	0:00	0:00
8	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)	0:00	0:00
9	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)	0:00	0:00
10	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)	0:00	0:00
11	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)	0:00	0:00
12	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)	0:00	0:00
13	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)	0:00	0:00
14	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)	22:38	9:40
15	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)	32:58	13:47
16	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (11)	17:16	6:40
17	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)	8:59	4:11
18	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)	20:12	9:03

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June				
1	08:53	08:20	07:20	07:46 (1)	07:03	05:51	04:58	05:32 (16)		
	16:10	17:04	18:02	3 07:49 (1)	20:03	21:02	21:54	13 05:45 (16)		
2	08:53	08:19	07:18	07:43 (1)	07:00	05:48	04:57	05:31 (16)		
	16:11	17:06	18:04	7 07:50 (1)	20:05	21:03	21:56	14 05:45 (16)		
3	08:52	08:17	07:16	07:41 (1)	06:57	05:46	04:56	05:31 (16)		
	16:13	17:08	18:06	10 07:51 (1)	20:07	21:05	21:57	16 05:47 (16)		
4	08:52	08:15	07:13	07:38 (1)	06:55	05:44	04:55	05:30 (16)		
	16:14	17:10	18:08	12 07:50 (1)	20:09	21:07	21:58	17 05:47 (16)		
5	08:52	08:13	07:11	07:37 (1)	06:52	05:42	04:55	05:30 (16)		
	16:15	17:12	18:10	14 07:51 (1)	20:11	21:09	21:59	18 05:48 (16)		
6	08:51	08:11	07:08	07:37 (1)	06:50	05:40	04:54	05:30 (16)		
	16:17	17:14	18:12	12 07:49 (1)	20:13	21:11	22:00	19 05:49 (16)		
7	08:51	08:09	07:06	07:38 (1)	06:47	07:12 (2)	05:38	04:53	05:30 (16)	
	16:18	17:16	18:14	10 07:48 (1)	20:15	2 07:14 (2)	21:13	22:01	19 05:49 (16)	
8	08:50	08:07	07:03	07:40 (1)	06:45	07:09 (2)	05:36	04:52	05:29 (16)	
	16:19	17:18	18:16	6 07:46 (1)	20:17	5 07:14 (2)	21:15	22:02	20 05:49 (16)	
9	08:50	08:05	07:01		06:42	07:07 (2)	05:34	04:52	05:30 (16)	
	16:21	17:21	18:18		20:19	7 07:14 (2)	21:17	22:03	20 05:50 (16)	
10	08:49	08:03	06:58		06:40	07:04 (2)	05:32	04:51	05:30 (16)	
	16:22	17:23	18:20		20:21	9 07:13 (2)	21:19	22:04	21 05:51 (16)	
11	08:48	08:01	06:56		06:37	07:04 (2)	05:30	04:51	05:29 (16)	
	16:24	17:25	18:22		20:23	8 07:12 (2)	21:20	22:05	21 05:50 (16)	
12	08:47	07:59	06:53		06:35	07:07 (2)	05:28	04:50	05:30 (16)	
	16:26	17:27	18:24		20:25	2 07:09 (2)	21:22	22:06	21 05:51 (16)	
13	08:46	07:57	06:51		06:33		05:26	04:50	05:30 (16)	
	16:27	17:29	18:26		20:27		21:24	22:07	22 05:52 (16)	
14	08:46	07:55	08:22 (6)	06:48	06:30	05:24	04:50	05:29 (16)		
	16:29	17:31	3 08:25 (6)	18:28	20:29	21:26	22:07	22 05:51 (16)		
15	08:45	07:53	08:19 (6)	06:46	06:28	05:23	04:49	05:30 (16)		
	16:31	17:33	7 08:26 (6)	18:30	20:31	21:28	22:08	22 05:52 (16)		
16	08:44	07:50	08:17 (6)	06:43	06:25	05:21	04:49	05:30 (16)		
	16:33	17:35	10 08:27 (6)	18:32	20:33	21:29	22:09	22 05:52 (16)		
17	08:42	07:48	08:15 (6)	06:41	06:23	05:19	04:49	05:30 (16)		
	16:34	17:37	13 08:28 (6)	18:34	20:34	21:31	22:09	22 05:52 (16)		
18	08:41	07:46	08:12 (6)	06:38	06:20	05:17	04:49	05:30 (16)		
	16:36	17:39	15 08:27 (6)	18:36	20:36	21:33	22:10	22 05:52 (16)		
19	08:40	07:44	08:10 (6)	06:36	07:00 (5)	06:18	05:16	04:49	05:30 (16)	
	16:38	17:42	17 08:27 (6)	18:38	2 07:02 (5)	20:38	21:35	22:10	23 05:53 (16)	
20	08:39	07:41	08:10 (6)	06:33	06:57 (5)	06:16	05:14	04:49	05:30 (16)	
	16:40	17:44	18 08:28 (6)	18:40	6 07:03 (5)	20:40	21:36	22:10	23 05:53 (16)	
21	08:38	07:39	08:10 (6)	06:31	06:55 (5)	06:13	05:13	04:49	05:31 (16)	
	16:42	17:46	16 08:26 (6)	18:42	9 07:04 (5)	20:42	21:38	22:11	23 05:54 (16)	
22	08:36	07:37	08:11 (6)	06:28	06:52 (5)	06:11	05:11	04:49	05:31 (16)	
	16:44	17:48	15 08:26 (6)	18:44	11 07:03 (5)	20:44	21:40	22:11	23 05:54 (16)	
23	08:35	07:35	08:12 (6)	06:25	06:50 (5)	06:09	05:10	04:49	05:31 (16)	
	16:46	17:50	12 08:24 (6)	18:46	14 07:04 (5)	20:46	21:41	22:11	23 05:54 (16)	
24	08:33	07:32	08:14 (6)	06:23	06:47 (5)	06:06	05:08	04:50	05:31 (16)	
	16:48	17:52	8 08:22 (6)	18:48	16 07:03 (5)	20:48	21:43	22:11	23 05:54 (16)	
25	08:32	07:30		06:20	06:47 (5)	06:04	05:07	04:50	05:32 (16)	
	16:50	17:54		18:50	14 07:01 (5)	20:50	21:44	22:11	22 05:54 (16)	
26	08:30	07:28		06:18	06:48 (5)	06:02	05:05	04:51	05:32 (16)	
	16:52	17:56		18:52	13 07:01 (5)	20:52	21:46	22:11	22 05:54 (16)	
27	08:29	07:25		06:15	06:49 (5)	05:59	05:04	04:51	05:33 (16)	
	16:54	17:58		18:54	9 06:58 (5)	20:54	21:47	22:11	22 05:55 (16)	
28	08:27	07:23		06:13		05:57	05:03	04:52	05:32 (16)	
	16:56	18:00		18:56		20:56	21:49	22:11	22 05:54 (16)	
29	08:26			07:10		05:55	05:02	04:52	05:33 (16)	
	16:58			19:58		20:58	21:50	4 05:40 (16)	22:10	22 05:55 (16)
30	08:24			07:08		05:53	05:00	05:34 (16)	04:53	05:34 (16)
	17:00			20:00		21:00	21:52	8 05:42 (16)	22:10	21 05:55 (16)
31	08:22			07:05			04:59	05:33 (16)		
	17:02			20:01			21:53	11 05:44 (16)		
Potential sun hours	244	270	366		422		499		517	
Total, worst case			134	168	33		23		620	
Sun reduction			0,24	0,34	0,39		0,52		0,48	
Oper. time red.			1,00	1,00	1,00		1,00		1,00	
Wind dir. red.			0,91	0,98	0,98		0,80		0,80	
Total reduction			0,23	0,34	0,39		0,42		0,39	
Total, real			30	57	13		10		245	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July		August		September		October		November		December	
1	04:54	05:33 (16)	05:36		06:33	07:03 (2)	07:29		07:30	08:27		
	22:10	05:55 (16)	21:32		20:23	07:11 (2)	19:07		16:53	16:06		
2	04:54	05:34 (16)	05:37		06:35	07:03 (2)	07:31		07:32	08:29		
	22:09	05:55 (16)	21:30		20:20	07:12 (2)	19:04		16:51	16:05		
3	04:55	05:35 (16)	05:39		06:36	07:05 (2)	07:32		07:34	08:30		
	22:09	05:55 (16)	21:29		20:18	07:12 (2)	19:01		16:49	16:05		
4	04:56	05:35 (16)	05:41		06:38	07:06 (2)	07:34		07:36	08:32		
	22:08	05:55 (16)	21:27		20:15	07:11 (2)	18:59		16:47	16:04		
5	04:57	05:36 (16)	05:43		06:40	07:08 (2)	07:36		08:19 (1)	07:38	08:34	
	22:08	05:55 (16)	21:25		20:13	07:11 (2)	18:56	2	08:21 (1)	16:45	16:03	
6	04:58	05:35 (16)	05:45		06:42		07:38		08:15 (1)	07:40	08:35	
	22:07	05:54 (16)	21:23		20:10		18:54	9	08:24 (1)	16:43	16:03	
7	04:59	05:36 (16)	05:46		06:44		07:40		08:14 (1)	07:42	08:36	
	22:06	05:54 (16)	21:21		20:08		18:51	11	08:25 (1)	16:41	16:02	
8	05:00	05:37 (16)	05:48		06:46		07:42		08:13 (1)	07:44	08:38	
	22:06	05:54 (16)	21:18		20:05		18:49	13	08:26 (1)	16:39	16:02	
9	05:01	05:37 (16)	05:50		06:48		07:44		08:12 (1)	07:46	08:39	
	22:05	05:54 (16)	21:16		20:03		18:46	14	08:26 (1)	16:37	16:01	
10	05:02	05:38 (16)	05:52		06:49		07:46		08:14 (1)	07:48	08:40	
	22:04	05:53 (16)	21:14		20:00		18:44	11	08:25 (1)	16:35	16:01	
11	05:03	05:40 (16)	05:54		06:51		07:48		08:16 (1)	07:50	08:41	
	22:03	05:54 (16)	21:12		19:58		18:41	8	08:24 (1)	16:34	16:01	
12	05:05	05:41 (16)	05:55		06:53		07:50		08:18 (1)	07:52	08:43	
	22:02	05:53 (16)	21:10		19:55		18:39	5	08:23 (1)	16:32	16:00	
13	05:06	05:42 (16)	05:57		06:55		07:52		08:20 (1)	07:54	08:44	
	22:01	05:51 (16)	21:08		19:53		18:37	1	08:21 (1)	16:30	16:00	
14	05:07	05:43 (16)	05:59		06:57		07:54		07:56	08:45		
	22:00	05:50 (16)	21:06		19:50		18:34		16:28	16:00		
15	05:08		06:01		06:59		07:56		07:58	08:46		
	21:59		21:03		19:47		18:32		16:27	16:00		
16	05:10		06:03		07:01		07:58		08:00	08:47		
	21:58		21:01		19:45	8	07:47 (5)	18:29		16:25	16:00	
17	05:11		06:05		07:02		07:37 (5)	08:00		08:02	08:47	
	21:56		20:59		19:42	12	07:49 (5)	18:27	3	08:51 (6)	16:23	16:00
18	05:13		06:07		07:04		07:36 (5)	08:02		08:44 (6)	08:04	08:48
	21:55		20:57		19:40	14	07:50 (5)	18:25	10	08:54 (6)	16:22	16:00
19	05:14		06:08		07:06		07:34 (5)	08:04		08:42 (6)	08:06	08:49
	21:54		20:54		19:37	15	07:49 (5)	18:22	14	08:56 (6)	16:20	16:01
20	05:16		06:10		07:08		07:35 (5)	08:06		08:41 (6)	08:08	08:50
	21:52		20:52		19:35	14	07:49 (5)	18:20	16	08:57 (6)	16:19	16:01
21	05:17		06:12		07:10		07:37 (5)	08:08		08:40 (6)	08:10	08:50
	21:51		20:50		19:32	12	07:49 (5)	18:18	17	08:57 (6)	16:18	16:01
22	05:19		06:14		07:12		07:39 (5)	08:10		08:40 (6)	08:12	08:51
	21:49		20:47		19:30	9	07:48 (5)	18:15	18	08:58 (6)	16:16	16:02
23	05:20		06:16		07:14		07:41 (5)	08:12		08:41 (6)	08:13	08:51
	21:48		20:45		19:27	7	07:48 (5)	18:13	17	08:58 (6)	16:15	16:02
24	05:22		06:18		07:16		07:43 (5)	08:14		08:43 (6)	08:15	08:52
	21:46		20:42		19:24	3	07:46 (5)	18:11	14	08:57 (6)	16:14	16:03
25	05:24		06:20		07:17		07:16			07:45 (6)	08:17	08:52
	21:45		20:40		19:22		17:08		12	07:57 (6)	16:12	16:04
26	05:25		06:22		07:19		07:18			07:47 (6)	08:19	08:52
	21:43		20:38		19:19		17:06		9	07:56 (6)	16:11	16:04
27	05:27		06:23		07:21		07:20			07:49 (6)	08:21	08:53
	21:41		20:35		19:17		17:04		6	07:55 (6)	16:10	16:05
28	05:29		06:25		07:23		07:22			07:52 (6)	08:22	08:53
	21:40		20:33		19:14		17:02		2	07:54 (6)	16:09	16:06
29	05:30		06:27		07:25		07:24			08:24	08:53	
	21:38		20:30		19:12		17:00			16:08	16:07	
30	05:32		06:29		07:27		07:26			08:26	08:53	
	21:36		20:28		19:09		16:57			16:07	16:08	
31	05:34		06:31		07:06 (2)		07:28				08:53	
	21:34		20:25	3	07:09 (2)		16:55				16:09	
Potential sun hours	519		464		383		327		254		227	
Total, worst case	230		3		126		212					
Sun reduction	0,49		0,52		0,40		0,31					
Oper. time red.	1,00		1,00		1,00		1,00					
Wind dir. red.	0,80		0,98		1,00		0,93					
Total reduction	0,40		0,52		0,40		0,29					
Total, real	91		2		50		61					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (1) 07:46 (1)	06:57 20:07	05:46 21:05
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (1) 07:46 (1)	06:55 20:09	05:44 21:07
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 07:47 (1)	06:52 20:11	05:42 21:09
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:47 (1)	06:50 20:13	05:40 21:11
7	08:51 16:18	08:09 17:16	07:06 18:14	07:32 (1) 07:46 (1)	06:47 20:15	05:38 21:13
8	08:50 16:19	08:07 17:18	07:03 18:16	07:33 (1) 07:46 (1)	06:45 20:17	05:36 21:15
9	08:50 16:21	08:05 17:21	07:01 18:18	07:33 (1) 07:44 (1)	06:42 20:19	05:34 21:17
10	08:49 16:22	08:03 17:23	06:58 18:20	07:35 (1) 07:43 (1)	06:40 20:21	05:32 21:19
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:02 (2) 07:09 (2)	05:30 21:20
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:00 (2) 07:09 (2)	05:28 21:22
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	06:58 (2) 07:07 (2)	05:26 21:24
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	06:59 (2) 07:06 (2)	05:24 21:26
15	08:45 16:31	07:53 17:33	08:19 (6) 08:21 (6)	06:46 18:30	06:28 20:31	04:49 21:28
16	08:44 16:33	07:50 17:35	08:17 (6) 08:23 (6)	06:43 18:32	06:25 20:33	04:49 21:29
17	08:42 16:34	07:48 17:37	08:15 (6) 08:24 (6)	06:41 18:34	06:23 20:34	04:49 21:31
18	08:41 16:36	07:46 17:39	08:12 (6) 08:24 (6)	06:38 18:36	06:20 20:36	04:49 21:33
19	08:40 16:38	07:44 17:42	08:10 (6) 08:25 (6)	06:36 18:38	06:18 20:38	04:49 21:35
20	08:39 16:40	07:41 17:44	08:08 (6) 08:26 (6)	06:33 18:40	06:16 20:40	04:49 21:36
21	08:38 16:42	07:39 17:46	08:06 (6) 08:25 (6)	06:31 18:42	06:13 20:42	04:49 21:38
22	08:36 16:44	07:37 17:48	08:07 (6) 08:25 (6)	06:28 18:44	06:11 20:44	04:49 21:40
23	08:35 16:46	07:35 17:50	08:07 (6) 08:24 (6)	06:25 18:46	06:09 20:46	04:49 21:41
24	08:33 16:48	07:32 17:52	08:08 (6) 08:23 (6)	06:23 18:48	06:06 20:48	04:50 21:43
25	08:32 16:50	07:30 17:54	08:08 (6) 08:21 (6)	06:20 18:50	06:04 20:50	04:50 21:44
26	08:30 16:52	07:28 17:56	08:11 (6) 08:19 (6)	06:18 18:52	06:02 20:52	04:51 21:46
27	08:29 16:54	07:25 17:58	06:15 18:54	06:40 (5) 06:56 (5)	05:59 20:54	04:51 21:47
28	08:27 16:56	07:23 18:00	06:13 18:56	06:41 (5) 06:56 (5)	05:57 20:56	04:52 21:49
29	08:26 16:58	07:21 18:02	07:10 19:58	07:41 (5) 07:54 (5)	05:55 20:58	04:52 21:50
30	08:24 17:00	07:19 18:04	07:08 20:00	07:43 (5) 07:52 (5)	05:53 21:00	04:53 21:52
31	08:22 17:02	07:17 18:06	07:05 20:01	07:41 (5) 07:50 (5)	05:51 21:02	04:53 21:54
Potential sun hours	244	270	366	422	499	517
Total, worst case			152	188	37	382
Sun reduction			0,24	0,34	0,39	0,48
Oper. time red.			1,00	1,00	1,00	1,00
Wind dir. red.			0,91	0,99	0,98	0,78
Total reduction			0,23	0,34	0,39	0,39
Total, real			35	64	15	147

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December					
1	04:54	05:30 (16)	05:36	06:33	07:01 (2)	07:29	07:30	08:27			
	22:10	05:44 (16)	21:32	20:23	07:08 (2)	19:07	16:53	16:06			
2	04:54	05:31 (16)	05:37	06:35	07:03 (2)	07:31	07:32	08:29			
	22:09	05:44 (16)	21:30	20:20	07:07 (2)	19:04	16:51	16:05			
3	04:55	05:32 (16)	05:39	06:36	07:05 (2)	07:32	08:15 (1)	07:34	08:30		
	22:09	05:44 (16)	21:29	20:18	07:06 (2)	19:01	08:19 (1)	16:49	16:05		
4	04:56	05:33 (16)	05:41	06:38	07:34	07:34	08:12 (1)	07:36	08:32		
	22:08	05:44 (16)	21:27	20:15	18:59	10	08:22 (1)	16:47	16:04		
5	04:57	05:34 (16)	05:43	06:40	07:36	07:36	08:10 (1)	07:38	08:33		
	22:08	05:44 (16)	21:25	20:13	18:56	12	08:22 (1)	16:45	16:03		
6	04:58	05:34 (16)	05:45	06:42	07:38	07:38	08:10 (1)	07:40	08:35		
	22:07	05:42 (16)	21:23	20:10	18:54	13	08:23 (1)	16:43	16:03		
7	04:59	05:36 (16)	05:46	06:44	07:40	07:40	08:09 (1)	07:42	08:36		
	22:06	05:40 (16)	21:21	20:08	18:51	14	08:23 (1)	16:41	16:02		
8	05:00	05:48	05:48	06:46	07:42	07:42	08:10 (1)	07:44	08:38		
	22:06	21:18	20:05	20:05	18:49	12	08:22 (1)	16:39	16:02		
9	05:01	05:50	05:50	06:48	07:44	07:44	08:12 (1)	07:46	08:39		
	22:05	21:16	20:03	20:03	18:46	10	08:22 (1)	16:37	16:01		
10	05:02	05:52	05:52	06:49	07:46	07:46	08:14 (1)	07:48	08:40		
	22:04	21:14	20:00	20:00	18:44	7	08:21 (1)	16:35	16:01		
11	05:03	05:54	05:54	06:51	07:48	07:48	08:16 (1)	07:50	08:41		
	22:03	21:12	19:58	19:58	18:41	3	08:19 (1)	16:34	16:01		
12	05:05	05:55	05:55	06:53	07:50	07:50	07:52	07:52	08:43		
	22:02	21:10	19:55	19:55	18:39	12	16:32	16:00	16:00		
13	05:06	05:57	05:57	06:55	07:35 (5)	07:52	07:54	07:54	08:44		
	22:01	21:08	19:53	19:53	8	07:43 (5)	18:37	16:30	16:00		
14	05:07	05:59	05:59	06:57	07:32 (5)	07:54	07:56	07:56	08:45		
	22:00	21:06	19:50	19:50	12	07:44 (5)	18:34	16:28	16:00		
15	05:08	06:01	06:01	06:59	07:31 (5)	07:56	08:46 (6)	07:58	08:46		
	21:59	21:03	19:47	19:47	14	07:45 (5)	18:32	3	08:49 (6)	16:27	16:00
16	05:10	06:03	06:03	07:01	07:30 (5)	07:58	08:42 (6)	08:00	08:47		
	21:58	21:01	19:45	19:45	16	07:46 (5)	18:29	10	08:52 (6)	16:25	16:00
17	05:11	06:05	06:05	07:02	07:30 (5)	08:00	08:40 (6)	08:02	08:47		
	21:56	20:59	19:42	19:42	16	07:46 (5)	18:27	14	08:54 (6)	16:23	16:00
18	05:13	06:07	06:07	07:04	07:32 (5)	08:02	08:39 (6)	08:04	08:48		
	21:55	20:57	19:40	19:40	14	07:46 (5)	18:25	16	08:55 (6)	16:22	16:00
19	05:14	06:08	06:08	07:06	07:33 (5)	08:04	08:38 (6)	08:06	08:49		
	21:54	20:54	19:37	19:37	11	07:44 (5)	18:22	17	08:55 (6)	16:20	16:01
20	05:16	06:10	06:10	07:08	07:35 (5)	08:06	08:37 (6)	08:08	08:50		
	21:52	20:52	19:35	19:35	8	07:43 (5)	18:20	18	08:55 (6)	16:19	16:01
21	05:17	06:12	06:12	07:10	07:37 (5)	08:08	08:37 (6)	08:10	08:50		
	21:51	20:50	19:32	19:32	5	07:42 (5)	18:18	18	08:55 (6)	16:18	16:01
22	05:19	06:14	06:14	07:12	07:39 (5)	08:10	08:39 (6)	08:12	08:51		
	21:49	20:47	19:30	19:30	1	07:40 (5)	18:15	17	08:56 (6)	16:16	16:02
23	05:20	06:16	06:16	07:14	08:12	08:12	08:41 (6)	08:13	08:51		
	21:48	20:45	19:27	19:27	14	18:13	08:55 (6)	16:15	16:02		
24	05:22	06:18	06:18	07:16	08:14	08:14	08:43 (6)	08:15	08:52		
	21:46	20:42	19:24	19:24	11	18:11	08:54 (6)	16:14	16:03		
25	05:24	06:20	06:20	07:17	07:16	07:16	07:45 (6)	08:17	08:52		
	21:45	20:40	19:22	19:22	8	17:08	07:53 (6)	16:12	16:04		
26	05:25	06:22	06:22	07:19	07:18	07:18	07:47 (6)	08:19	08:52		
	21:43	20:38	19:19	19:19	5	17:06	07:52 (6)	16:11	16:04		
27	05:27	06:23	06:23	07:21	07:20	07:20	07:49 (6)	08:21	08:53		
	21:41	20:35	19:17	19:17	1	17:04	07:50 (6)	16:10	16:05		
28	05:29	06:25	06:25	07:23	07:22	07:22	08:22	08:22	08:53		
	21:40	20:33	19:14	19:14	17:02	16:09	16:09	16:06	16:06		
29	05:30	06:27	06:27	07:00 (2)	07:25	07:24	08:24	08:24	08:53		
	21:38	20:30	7	07:07 (2)	19:12	17:00	16:08	16:07	16:07		
30	05:32	06:29	06:29	06:59 (2)	07:27	07:26	08:26	08:26	08:53		
	21:36	20:28	9	07:08 (2)	19:09	16:57	16:07	16:07	16:08		
31	05:34	06:31	06:31	06:59 (2)	07:28	07:28	08:28	08:28	08:53		
	21:34	20:25	9	07:08 (2)	16:55	16:55	16:09	16:09	16:09		
Potential sun hours	519	464	383	327	254	227					
Total, worst case	72	25	117	237							
Sun reduction	0,49	0,52	0,40	0,31							
Oper. time red.	1,00	1,00	1,00	1,00							
Wind dir. red.	0,78	0,98	1,00	0,93							
Total reduction	0,39	0,51	0,40	0,29							
Total, real	28	13	47	69							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:59 (6) 08:12 (6)	07:03 20:03	07:33 (5) 21:02
2	08:53 16:11	08:19 17:06	07:18 18:04	08:00 (6) 08:09 (6)	07:00 20:05	07:33 (5) 21:03
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:36 (5) 21:05	05:48 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	07:41 (5) 21:07	05:44 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:35 (1)	06:50 20:13	05:40 21:11
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 07:36 (1)	06:47 20:15	05:38 21:13
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 07:37 (1)	06:45 20:17	05:36 21:15
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 07:37 (1)	06:42 20:19	05:34 21:17
10	08:49 16:22	08:03 17:23	06:58 18:20	07:24 (1) 07:37 (1)	06:40 20:21	05:32 21:19
11	08:48 16:24	08:01 17:25	06:56 18:22	07:23 (1) 07:37 (1)	06:37 20:23	05:30 21:20
12	08:47 16:26	07:59 17:27	06:53 18:24	07:24 (1) 07:36 (1)	06:35 20:25	05:28 21:22
13	08:46 16:27	07:57 17:29	06:51 18:26	07:25 (1) 07:34 (1)	06:33 20:27	05:26 21:24
14	08:46 16:29	07:55 17:31	06:48 18:28	07:28 (1) 07:32 (1)	06:30 20:29	05:24 21:26
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	06:52 (2) 07:01 (2)	05:23 21:28
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	06:52 (2) 07:00 (2)	05:21 21:29
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	06:54 (2) 06:58 (2)	05:19 21:31
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 18:54	06:39 (5) 06:48 (5)	05:59 20:54	05:04 21:47
28	08:27 16:56	07:23 18:00	06:13 18:56	06:37 (5) 06:49 (5)	05:57 20:56	05:03 21:49
29	08:26 16:58	07:21 18:02	06:11 18:58	06:35 (5) 07:34 (5)	05:55 20:58	05:02 21:50
30	08:24 17:00	07:19 18:04	06:09 19:00	06:33 (5) 07:48 (5)	05:53 21:00	05:00 21:52
31	08:22 17:02	07:17 18:06	06:07 19:02	06:31 (5) 07:47 (5)	05:51 21:02	04:59 21:53
Potential sun hours	244	270	366	422	499	517
Total, worst case		124	177	65		239
Sun reduction		0,24	0,34	0,39		0,48
Oper. time red.		1,00	1,00	1,00		1,00
Wind dir. red.		0,93	0,98	0,98		0,77
Total reduction		0,23	0,34	0,39		0,38
Total, real		29	60	26		91

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December
1	04:54	05:29 (16)	05:36	06:33	07:29	08:04 (1)
	22:10	05:37 (16)	21:32	20:23	19:07	08:15 (1)
2	04:54	05:31 (16)	05:37	06:35	07:31	08:03 (1)
	22:09	05:37 (16)	21:30	20:20	19:04	08:15 (1)
3	04:55	05:33 (16)	05:39	06:36	07:32	08:02 (1)
	22:09	05:35 (16)	21:29	20:18	19:01	08:15 (1)
4	04:56		05:41	06:38	07:34	08:02 (1)
	22:08		21:27	20:15	18:59	08:15 (1)
5	04:57		05:43	06:40	07:36	08:04 (1)
	22:08		21:25	20:13	18:56	08:15 (1)
6	04:58		05:45	06:42	07:38	08:06 (1)
	22:07		21:23	20:10	18:54	08:14 (1)
7	04:59		05:46	06:44	07:40	08:08 (1)
	22:06		21:21	20:08	18:51	08:12 (1)
8	05:00		05:48	06:46	07:42	08:14 (1)
	22:06		21:18	20:05	18:49	08:15 (1)
9	05:01		05:50	06:48	07:44	08:16 (1)
	22:05		21:16	20:03	18:46	08:16 (1)
10	05:02		05:52	06:49	07:46	08:17 (1)
	22:04		21:14	20:00	18:44	08:17 (1)
11	05:03		05:54	06:51	07:48	08:36 (6)
	22:03		21:12	19:58	18:41	08:41 (6)
12	05:05		05:55	06:53	07:50	08:33 (6)
	22:02		21:10	19:55	18:39	08:44 (6)
13	05:06		05:57	06:55	07:52	08:31 (6)
	22:01		21:08	19:53	18:37	08:45 (6)
14	05:07		05:59	06:57	07:54	08:30 (6)
	22:00		21:06	19:50	18:34	08:46 (6)
15	05:09		06:01	06:59	07:56	08:29 (6)
	21:59		21:03	19:47	18:32	08:46 (6)
16	05:10		06:03	07:01	07:58	08:28 (6)
	21:58		21:01	19:45	18:29	08:47 (6)
17	05:11		06:05	07:02	08:00	08:28 (6)
	21:56		20:59	19:42	18:27	08:46 (6)
18	05:13		06:07	07:04	08:02	08:30 (6)
	21:55		20:57	19:40	18:25	08:46 (6)
19	05:14		06:08	07:06	08:04	08:32 (6)
	21:54		20:54	19:37	18:22	08:45 (6)
20	05:16		06:10	07:08	08:06	08:34 (6)
	21:52		20:52	19:35	18:20	08:44 (6)
21	05:17		06:12	07:10	08:08	08:36 (6)
	21:51		20:50	19:32	18:18	08:43 (6)
22	05:19		06:14	07:12	08:10	08:39 (6)
	21:49		20:47	19:30	18:15	08:42 (6)
23	05:20		06:16	07:14	08:12	08:13
	21:48		20:45	19:27	18:13	16:15
24	05:22		06:18	07:16	08:14	08:15
	21:46		20:42	19:24	18:11	16:14
25	05:24		06:20	07:17	07:16	08:17
	21:45		20:40	19:22	17:08	16:12
26	05:25		06:22	07:19	07:18	08:19
	21:43		20:38	19:19	17:06	16:11
27	05:27		06:23	07:21	07:20	08:21
	21:41		20:35	19:17	17:04	16:10
28	05:29		06:25	07:23	07:22	08:22
	21:40		20:33	19:14	17:02	16:09
29	05:30		06:27	07:25	07:24	08:24
	21:38		20:30	19:12	17:00	16:08
30	05:32		06:29	07:27	08:06 (1)	08:26
	21:36		20:28	19:09	08:13 (1)	16:07
31	05:34		06:31	07:29	07:28	08:27
	21:34		20:25	19:07	16:55	16:09
Potential sun hours	519	464	383	327	254	227
Total, worst case	16	35	109	221		
Sun reduction	0,49	0,52	0,40	0,31		
Oper. time red.	1,00	1,00	1,00	1,00		
Wind dir. red.	0,77	0,97	1,00	0,95		
Total reduction	0,38	0,51	0,40	0,30		
Total, real	6	18	44	65		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June
1	08:53	08:20	07:20	08:06 (6)	07:03	05:51
	16:10	17:04	18:02	20:03	21:02	21:54
2	08:53	08:19	07:18	08:08 (6)	07:00	05:48
	16:11	17:06	18:04	20:05	21:03	21:56
3	08:52	08:17	07:16	06:57	05:46	04:56
	16:13	17:08	18:06	20:07	21:05	21:57
4	08:52	08:15	07:13	06:55	05:44	04:55
	16:14	17:10	18:08	20:09	21:07	21:58
5	08:52	08:13	07:11	07:36 (1)	06:52	05:42
	16:15	17:12	18:10	20:11	21:09	21:59
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40
	16:17	17:14	18:12	20:13	21:11	22:00
7	08:51	08:09	07:06	07:30 (1)	06:47	05:38
	16:18	17:16	18:14	20:15	21:13	22:01
8	08:50	08:07	07:03	07:28 (1)	06:45	05:36
	16:19	17:18	18:16	20:17	21:15	22:02
9	08:50	08:05	07:01	07:27 (1)	06:42	05:34
	16:21	17:21	18:18	20:19	21:17	22:03
10	08:49	08:03	06:58	07:28 (1)	06:40	05:32
	16:22	17:23	18:20	20:21	21:19	22:04
11	08:48	08:01	06:56	07:28 (1)	06:37	05:30
	16:24	17:25	18:22	20:23	21:20	22:05
12	08:47	07:59	06:53	07:31 (1)	06:35	05:28
	16:26	17:27	18:24	20:25	21:22	22:06
13	08:46	07:57	06:51	06:33	06:57 (2)	05:26
	16:27	17:29	18:26	20:27	21:24	22:07
14	08:46	07:55	06:48	06:30	06:58 (2)	05:24
	16:29	17:31	18:28	20:29	21:26	22:07
15	08:45	07:53	06:46	06:28	05:23	04:49
	16:31	17:33	18:30	20:31	21:28	22:08
16	08:44	07:50	06:43	06:25	05:21	04:49
	16:33	17:35	18:32	20:33	21:29	22:09
17	08:42	07:48	06:41	06:23	05:19	04:49
	16:34	17:37	18:34	20:34	21:31	22:09
18	08:41	07:46	06:38	06:20	05:17	04:49
	16:36	17:39	18:36	20:36	21:33	22:10
19	08:40	07:44	08:10 (6)	06:36	06:18	05:16
	16:38	17:42	18:38	20:38	21:35	22:10
20	08:39	07:41	08:08 (6)	06:33	06:16	05:14
	16:40	17:44	18:40	20:40	21:36	22:10
21	08:38	07:39	08:05 (6)	06:31	06:13	05:13
	16:42	17:46	18:42	20:42	21:38	22:11
22	08:36	07:37	08:03 (6)	06:28	06:11	05:11
	16:44	17:48	18:44	20:44	21:40	22:11
23	08:35	07:35	08:00 (6)	06:25	06:50 (5)	06:09
	16:46	17:50	18:46	20:46	21:41	22:11
24	08:33	07:32	07:59 (6)	06:23	06:47 (5)	06:06
	16:48	17:52	18:48	20:48	21:43	22:11
25	08:32	07:30	07:59 (6)	06:20	06:44 (5)	06:04
	16:50	17:54	18:50	20:50	21:44	22:11
26	08:30	07:28	08:00 (6)	06:18	06:42 (5)	06:02
	16:52	17:56	18:52	20:52	21:46	22:11
27	08:29	07:25	08:01 (6)	06:15	06:39 (5)	05:59
	16:54	17:58	18:54	20:54	21:47	22:11
28	08:27	07:23	08:02 (6)	06:13	06:38 (5)	05:57
	16:56	18:00	18:56	20:56	21:49	22:11
29	08:26		07:10	07:37 (5)	05:55	05:02
	16:58		19:58	20:58	21:50	22:10
30	08:24		07:08	07:39 (5)	05:53	05:00
	17:00		20:00	21:00	21:52	22:10
31	08:22		07:05	07:40 (5)	04:59	
	17:02		20:01	07:47 (5)	21:53	
Potential sun hours	244	270	366	422	499	517
Total, worst case		125	165	31		509
Sun reduction		0,24	0,34	0,39		0,48
Oper. time red.		1,00	1,00	1,00		1,00
Wind dir. red.		0,93	0,99	0,98		0,79
Total reduction		0,23	0,34	0,39		0,39
Total, real		29	57	12		199

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December				
1	04:54	05:31 (16)	05:36	06:33	07:01 (2)	07:29	07:30	08:27		
	22:10	05:49 (16)	21:32	20:23	07:06 (2)	19:07	16:53	16:06		
2	04:54	05:31 (16)	05:37	06:35	07:03 (2)	07:31	08:08 (1)	07:32	08:29	
	22:09	05:49 (16)	21:30	20:20	07:06 (2)	19:04	08:16 (1)	16:51	16:05	
3	04:55	05:32 (16)	05:39	06:36	07:32	07:32	08:06 (1)	07:34	08:30	
	22:09	05:49 (16)	21:29	20:18	19:01	11	08:17 (1)	16:49	16:05	
4	04:56	05:33 (16)	05:41	06:38	07:34	07:34	08:05 (1)	07:36	08:32	
	22:08	05:49 (16)	21:27	20:15	18:59	13	08:18 (1)	16:47	16:04	
5	04:57	05:33 (16)	05:43	06:40	07:36	07:36	08:05 (1)	07:38	08:33	
	22:08	05:49 (16)	21:25	20:13	18:56	13	08:18 (1)	16:45	16:03	
6	04:58	05:33 (16)	05:45	06:42	07:38	07:38	08:06 (1)	07:40	08:35	
	22:07	05:48 (16)	21:23	20:10	18:54	11	08:17 (1)	16:43	16:03	
7	04:59	05:34 (16)	05:46	06:44	07:40	07:40	08:08 (1)	07:42	08:36	
	22:06	05:48 (16)	21:21	20:08	18:51	9	08:17 (1)	16:41	16:02	
8	05:00	05:35 (16)	05:48	06:46	07:42	07:42	08:10 (1)	07:44	08:38	
	22:06	05:47 (16)	21:18	20:05	18:49	6	08:16 (1)	16:39	16:02	
9	05:01	05:36 (16)	05:50	06:48	07:44	07:44	08:12 (1)	07:46	08:39	
	22:05	05:46 (16)	21:16	20:03	18:46	2	08:14 (1)	16:37	16:01	
10	05:02	05:37 (16)	05:52	06:49	07:46	07:46	08:10 (1)	07:48	08:40	
	22:04	05:45 (16)	21:14	20:00	18:44	11	08:17 (1)	16:35	16:01	
11	05:03	05:40 (16)	05:54	06:51	07:48	07:48	08:10 (1)	07:50	08:41	
	22:03	05:44 (16)	21:12	19:58	18:41	11	08:17 (1)	16:34	16:01	
12	05:05	05:46 (16)	05:55	06:53	07:33 (5)	07:50	07:52	08:43	08:43	
	22:02	21:10	19:55	6	07:39 (5)	18:39	16:32	16:00	16:00	
13	05:06	05:57	06:55	07:30 (5)	07:52	07:52	08:37 (6)	07:54	08:44	
	22:01	21:08	19:53	11	07:41 (5)	18:37	7	08:44 (6)	16:30	16:00
14	05:07	05:59	06:57	07:28 (5)	07:54	07:54	08:34 (6)	07:56	08:45	
	22:00	21:06	19:50	13	07:41 (5)	18:34	12	08:46 (6)	16:28	16:00
15	05:09	06:01	06:59	07:27 (5)	07:56	07:56	08:33 (6)	07:58	08:46	
	21:59	21:03	19:47	15	07:42 (5)	18:32	14	08:47 (6)	16:27	16:00
16	05:10	06:03	07:01	07:28 (5)	07:58	07:58	08:31 (6)	08:00	08:47	
	21:58	21:01	19:45	14	07:42 (5)	18:29	17	08:48 (6)	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:00	08:31 (6)	08:02	08:47	
	21:56	20:59	19:42	12	07:42 (5)	18:27	17	08:48 (6)	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:02	08:30 (6)	08:04	08:48	
	21:55	20:57	19:40	10	07:42 (5)	18:25	18	08:48 (6)	16:22	16:00
19	05:14	06:08	07:06	07:33 (5)	08:04	08:04	08:32 (6)	08:06	08:49	
	21:54	20:54	19:37	7	07:40 (5)	18:22	15	08:47 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:06	08:34 (6)	08:08	08:50	
	21:52	20:52	19:35	4	07:39 (5)	18:20	13	08:47 (6)	16:19	16:01
21	05:17	06:12	07:10	08:08	08:08	08:08	08:36 (6)	08:10	08:50	
	21:51	20:50	19:32	10	08:46 (6)	16:18	10	08:46 (6)	16:18	16:01
22	05:19	06:14	07:12	08:10	08:10	08:10	08:39 (6)	08:12	08:51	
	21:49	20:47	19:30	7	08:46 (6)	16:16	7	08:46 (6)	16:16	16:02
23	05:20	06:16	07:14	08:12	08:12	08:12	08:41 (6)	08:13	08:51	
	21:48	20:45	19:27	3	08:44 (6)	16:15	3	08:44 (6)	16:15	16:02
24	05:22	06:18	07:16	08:14	08:14	08:14	08:35 (6)	08:15	08:52	
	21:46	20:42	19:24	18:11	18:11	18:11	16:14	16:03	16:03	
25	05:24	06:20	07:17	07:16	07:16	07:16	08:17	08:17	08:52	
	21:45	20:40	19:22	17:08	17:08	17:08	16:12	16:04	16:04	
26	05:25	06:22	07:19	07:18	07:18	07:18	08:19	08:19	08:52	
	21:43	20:38	19:19	17:06	17:06	17:06	16:11	16:04	16:04	
27	05:27	06:23	07:21	07:20	07:20	07:20	08:21	08:21	08:53	
	21:41	20:35	19:17	17:04	17:04	17:04	16:10	16:05	16:05	
28	05:29	06:25	07:23	07:22	07:22	07:22	08:22	08:22	08:53	
	21:40	20:33	19:14	17:02	17:02	17:02	16:09	16:06	16:06	
29	05:30	06:27	06:59 (2)	07:25	07:24	07:24	08:24	08:24	08:53	
	21:38	20:30	7	07:06 (2)	19:12	17:00	16:08	16:07	16:07	
30	05:32	06:29	06:58 (2)	07:27	07:26	07:26	08:26	08:26	08:53	
	21:36	20:28	9	07:07 (2)	19:09	16:57	16:07	16:08	16:08	
31	05:34	06:31	06:59 (2)	07:28	07:28	07:28	08:28	08:28	08:53	
	21:34	20:25	7	07:06 (2)	16:55	16:55	16:09	16:09	16:09	
Potential sun hours	519	464	383	327	254	227				
Total, worst case	148	23	100	206						
Sun reduction	0,49	0,52	0,40	0,31						
Oper. time red.	1,00	1,00	1,00	1,00						
Wind dir. red.	0,79	0,98	1,00	0,95						
Total reduction	0,39	0,51	0,40	0,30						
Total, real	58	12	40	61						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June			
1	08:53	08:20	07:20	07:58 (6)	07:03	05:51			
	16:10	17:04	18:02	11 08:09 (6)	20:03	21:02	21:54	9 05:39 (16)	
2	08:53	08:19	07:18	08:00 (6)	07:00	05:48	04:57	05:29 (16)	
	16:11	17:06	18:04	5 08:05 (6)	20:05	21:03	21:56	11 05:40 (16)	
3	08:52	08:17	07:16	07:16	06:57	05:46	04:56	05:29 (16)	
	16:13	17:08	18:06		20:07	21:05	21:57	13 05:42 (16)	
4	08:52	08:15	07:13	07:13	06:55	05:44	04:55	05:29 (16)	
	16:14	17:10	18:08		20:09	21:07	21:58	14 05:43 (16)	
5	08:52	08:13	07:11		06:52	05:42	04:55	05:28 (16)	
	16:15	17:12	18:10		20:11	21:09	21:59	15 05:43 (16)	
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40	04:54	05:28 (16)	
	16:17	17:14	18:12	3 07:36 (1)	20:13	21:11	22:00	16 05:44 (16)	
7	08:51	08:09	07:06	07:30 (1)	06:47	05:38	04:53	05:27 (16)	
	16:18	17:16	18:14	7 07:37 (1)	20:15	21:13	22:01	17 05:44 (16)	
8	08:50	08:07	07:03	07:28 (1)	06:45	05:36	04:52	05:27 (16)	
	16:19	17:18	18:16	10 07:38 (1)	20:17	21:15	22:02	17 05:44 (16)	
9	08:50	08:05	07:01	07:25 (1)	06:42	05:34	04:52	05:27 (16)	
	16:21	17:21	18:18	12 07:37 (1)	20:19	21:17	22:03	18 05:45 (16)	
10	08:49	08:03	06:58	07:25 (1)	06:40	07:04 (2)	05:32	04:51	05:28 (16)
	16:22	17:23	18:20	12 07:37 (1)	20:21	2 07:06 (2)	21:19	22:04	18 05:46 (16)
11	08:48	08:01	06:56	07:25 (1)	06:37	07:02 (2)	05:30	04:51	05:27 (16)
	16:24	17:25	18:22	11 07:36 (1)	20:23	5 07:07 (2)	21:20	22:05	19 05:46 (16)
12	08:47	07:59	06:53	07:26 (1)	06:35	07:00 (2)	05:28	04:50	05:27 (16)
	16:26	17:27	18:24	9 07:35 (1)	20:25	7 07:07 (2)	21:22	22:06	20 05:47 (16)
13	08:46	07:57	06:51	07:29 (1)	06:33	06:57 (2)	05:26	04:50	05:28 (16)
	16:27	17:29	18:26	2 07:31 (1)	20:27	8 07:05 (2)	21:24	22:07	19 05:47 (16)
14	08:46	07:55	06:48		06:30	06:58 (2)	05:24	04:50	05:27 (16)
	16:29	17:31	18:28		20:29	6 07:04 (2)	21:26	22:07	20 05:47 (16)
15	08:45	07:53	06:46		06:28		05:23	04:49	05:27 (16)
	16:31	17:33	18:30		20:31		21:28	22:08	20 05:47 (16)
16	08:44	07:50	06:43		06:25		05:21	04:49	05:27 (16)
	16:33	17:35	18:32		20:33		21:29	22:09	21 05:48 (16)
17	08:42	07:48	06:41		06:23		05:19	04:49	05:27 (16)
	16:34	17:37	18:34		20:34		21:31	22:09	21 05:48 (16)
18	08:41	07:46	06:38		06:20		05:17	04:49	05:28 (16)
	16:36	17:39	18:36		20:36		21:33	22:10	20 05:48 (16)
19	08:40	07:44	06:36		06:18		05:16	04:49	05:28 (16)
	16:38	17:42	18:38		20:38		21:35	22:10	20 05:48 (16)
20	08:39	07:41	08:08 (6)	06:33	06:16		05:14	04:49	05:28 (16)
	16:40	17:44	2 08:10 (6)	18:40	20:40		21:36	22:10	21 05:49 (16)
21	08:38	07:39	08:05 (6)	06:31	06:13		05:13	04:49	05:29 (16)
	16:42	17:46	6 08:11 (6)	18:42	20:42		21:38	22:11	21 05:50 (16)
22	08:36	07:37	08:03 (6)	06:28	06:11		05:11	04:49	05:29 (16)
	16:44	17:48	9 08:12 (6)	18:44	20:44		21:40	22:11	21 05:50 (16)
23	08:35	07:35	08:00 (6)	06:25	06:09		05:10	04:49	05:29 (16)
	16:46	17:50	12 08:12 (6)	18:46	20:46		21:41	22:11	20 05:49 (16)
24	08:33	07:32	07:58 (6)	06:23	06:47 (5)	06:06	05:08	04:50	05:29 (16)
	16:48	17:52	15 08:13 (6)	18:48	4 06:51 (5)	20:48	21:43	22:11	20 05:49 (16)
25	08:32	07:30	07:55 (6)	06:20	06:44 (5)	06:04	05:07	04:50	05:30 (16)
	16:50	17:54	17 08:12 (6)	18:50	7 06:51 (5)	20:50	21:44	22:11	20 05:50 (16)
26	08:30	07:28	07:55 (6)	06:18	06:42 (5)	06:02	05:05	04:51	05:29 (16)
	16:52	17:56	17 08:12 (6)	18:52	10 06:52 (5)	20:52	21:46	22:11	21 05:50 (16)
27	08:29	07:25	07:56 (6)	06:15	06:39 (5)	05:59	05:04	04:51	05:30 (16)
	16:54	17:58	16 08:12 (6)	18:54	12 06:51 (5)	20:54	21:47	22:11	20 05:50 (16)
28	08:27	07:23	07:56 (6)	06:13	06:37 (5)	05:57	05:03	04:52	05:30 (16)
	16:56	18:00	14 08:10 (6)	18:56	14 06:51 (5)	20:56	21:49	22:11	20 05:50 (16)
29	08:26			07:10	07:36 (5)	05:55	05:02	04:52	05:31 (16)
	16:58			19:58	14 07:50 (5)	20:58	21:50	22:10	20 05:51 (16)
30	08:24			07:08	07:37 (5)	05:53	05:00	04:53	05:31 (16)
	17:00			20:00	12 07:49 (5)	21:00	21:52	22:10	20 05:51 (16)
31	08:22			07:05	07:38 (5)		04:59	05:32 (16)	
	17:02			20:01	8 07:46 (5)		21:53	5 05:37 (16)	
Potential sun hours	244	270	366	422	499	517			
Total, worst case			108	163	28	5		552	
Sun reduction			0,24	0,34	0,39	0,52		0,48	
Oper. time red.			1,00	1,00	1,00	1,00		1,00	
Wind dir. red.			0,94	0,99	0,98	0,79		0,79	
Total reduction			0,23	0,34	0,39	0,42		0,39	
Total, real			25	56	11	2		216	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December					
1	04:54	05:31 (16)	05:36	06:33	07:01 (2)	07:29	08:06 (1)	07:30	08:27		
2	22:10	05:50 (16)	21:32	20:23	07:06 (2)	19:07	7	08:13 (1)	16:53	16:06	
2	04:54	05:32 (16)	05:37	06:35	07:03 (2)	07:31	08:04 (1)	07:32	08:29		
	22:09	05:51 (16)	21:30	20:20	07:05 (2)	19:04	10	08:14 (1)	16:51	16:05	
3	04:55	05:32 (16)	05:39	06:36		07:32	08:03 (1)	07:34	08:30		
	22:09	05:51 (16)	21:29	20:18		19:01	12	08:15 (1)	16:49	16:05	
4	04:56	05:33 (16)	05:41	06:38		07:34	08:02 (1)	07:36	08:32		
	22:08	05:51 (16)	21:27	20:15		18:59	13	08:15 (1)	16:47	16:04	
5	04:57	05:34 (16)	05:43	06:40		07:36	08:04 (1)	07:38	08:34		
	22:08	05:51 (16)	21:25	20:13		18:56	11	08:15 (1)	16:45	16:03	
6	04:58	05:33 (16)	05:45	06:42		07:38	08:06 (1)	07:40	08:35		
	22:07	05:50 (16)	21:23	20:10		18:54	8	08:14 (1)	16:43	16:03	
7	04:59	05:34 (16)	05:46	06:44		07:40	08:08 (1)	07:42	08:36		
	22:06	05:50 (16)	21:21	20:08		18:51	5	08:13 (1)	16:41	16:02	
8	05:00	05:35 (16)	05:48	06:46		07:42	08:10 (1)	07:44	08:38		
	22:06	05:49 (16)	21:18	20:05		18:49	1	08:11 (1)	16:39	16:02	
9	05:01	05:35 (16)	05:50	06:48		07:44		07:46	08:39		
	22:05	05:49 (16)	21:16	20:03		18:46		16:37	16:01		
10	05:02	05:36 (16)	05:52	06:49		07:46		07:48	08:40		
	22:04	05:48 (16)	21:14	20:00		18:44		16:35	16:01		
11	05:03	05:38 (16)	05:54	06:51		07:48		07:50	08:41		
	22:03	05:48 (16)	21:12	19:58		18:41		16:34	16:01		
12	05:05	05:40 (16)	05:55	06:53	07:30 (5)	07:50	08:33 (6)	07:52	08:43		
	22:02	05:47 (16)	21:10	19:55	8	07:38 (5)	18:39	8	08:41 (6)	16:32	16:00
13	05:06		05:57	06:55		07:52	08:30 (6)	07:54	08:44		
	22:01		21:08	19:53	12	07:40 (5)	18:37	13	08:43 (6)	16:30	16:00
14	05:07		05:59	06:57		07:54	08:29 (6)	07:56	08:45		
	22:00		21:06	19:50	14	07:40 (5)	18:34	15	08:44 (6)	16:28	16:00
15	05:09		06:01	06:59		07:56	08:28 (6)	07:58	08:46		
	21:59		21:03	19:47	14	07:40 (5)	18:32	16	08:44 (6)	16:27	16:00
16	05:10		06:03	07:01		07:58	08:27 (6)	08:00	08:47		
	21:58		21:01	19:45	12	07:40 (5)	18:29	17	08:44 (6)	16:25	16:00
17	05:11		06:05	07:02		08:00	08:28 (6)	08:02	08:47		
	21:56		20:59	19:42	10	07:40 (5)	18:27	16	08:44 (6)	16:23	16:00
18	05:13		06:07	07:04		08:02	08:30 (6)	08:04	08:48		
	21:55		20:57	19:40	7	07:39 (5)	18:25	14	08:44 (6)	16:22	16:00
19	05:14		06:08	07:06		08:04	08:32 (6)	08:06	08:49		
	21:54		20:54	19:37	4	07:37 (5)	18:22	11	08:43 (6)	16:20	16:01
20	05:16		06:10	07:08		08:06	08:34 (6)	08:08	08:50		
	21:52		20:52	19:35	1	07:36 (5)	18:20	8	08:42 (6)	16:19	16:01
21	05:17		06:12	07:10		08:08	08:36 (6)	08:10	08:50		
	21:51		20:50	19:32		18:18	5	08:41 (6)	16:18	16:01	
22	05:19		06:14	07:12		08:10	08:39 (6)	08:12	08:51		
	21:49		20:47	19:30		18:15	1	08:40 (6)	16:16	16:02	
23	05:20		06:16	07:14		08:12		08:13	08:51		
	21:48		20:45	19:27		18:13		16:15	16:02		
24	05:22		06:18	07:16		08:14		08:15	08:52		
	21:46		20:42	19:24		18:11		16:14	16:03		
25	05:24		06:20	07:17		07:16		08:17	08:52		
	21:45		20:40	19:22		17:08		16:12	16:04		
26	05:25		06:22	07:19		07:18		08:19	08:52		
	21:43		20:38	19:19		17:06		16:11	16:04		
27	05:27		06:23	07:21		07:20		08:21	08:53		
	21:41		20:35	19:17		17:04		16:10	16:05		
28	05:29		06:25	07:23		07:22		08:22	08:53		
	21:40		20:33	19:14		17:02		16:09	16:06		
29	05:30		06:27	06:58 (2)	07:25	07:24		08:24	08:53		
	21:38		20:30	7	07:05 (2)	19:12		16:08	16:07		
30	05:32		06:29	06:58 (2)	07:27	07:26		08:26	08:53		
	21:36		20:28	8	07:06 (2)	19:09		16:07	16:08		
31	05:34		06:31	06:59 (2)		07:28			08:53		
	21:34		20:25	7	07:06 (2)	16:55			16:09		
Potential sun hours	519	464		383		327		254	227		
Total, worst case	182		22		89		191				
Sun reduction	0,49		0,52		0,40		0,31				
Oper. time red.	1,00		1,00		1,00		1,00				
Wind dir. red.	0,79		0,98		1,00		0,95				
Total reduction	0,39		0,51		0,40		0,30				
Total, real	72		11		36		57				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:46 (6) 07:51 (6)	07:03 20:03	
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (6) 07:51 (6)	07:00 20:05	10 07:29 (5)
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (6) 07:51 (6)	06:57 20:07	7 07:36 (5)
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (6) 07:51 (6)	06:55 20:09	
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 07:51 (6)	06:52 20:11	
6	08:51 16:17	08:11 17:14	07:08 18:12	07:37 (6) 07:49 (6)	06:50 20:13	
7	08:51 16:18	08:09 17:16	07:06 18:14	07:38 (6) 07:48 (6)	06:47 20:15	
8	08:50 16:19	08:07 17:18	07:03 18:16	07:41 (6) 07:44 (6)	06:45 20:17	
9	08:50 16:21	08:05 17:21	07:01 18:18		06:42 20:19	
10	08:49 16:23	08:03 17:23	06:58 18:20		06:40 20:21	
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (1) 07:21 (1)	06:37 20:23	07:02 (2) 07:03 (2)
12	08:47 16:26	07:59 17:27	06:53 18:24	07:18 (1) 07:22 (1)	06:35 20:25	07:00 (2) 07:03 (2)
13	08:46 16:27	07:57 17:29	06:51 18:26	07:15 (1) 07:22 (1)	06:33 20:27	06:57 (2) 07:02 (2)
14	08:46 16:29	07:55 17:31	06:48 18:28	07:13 (1) 07:22 (1)	06:30 20:29	06:55 (2) 07:01 (2)
15	08:45 16:31	07:53 17:33	06:46 18:30	07:11 (1) 07:21 (1)	06:28 20:31	
16	08:44 16:33	07:50 17:35	06:43 18:32	07:12 (1) 07:20 (1)	06:25 20:33	
17	08:42 16:34	07:48 17:37	06:41 18:34	07:15 (1) 07:16 (1)	06:23 20:34	
18	08:41 16:36	07:46 17:39	06:38 18:36		06:20 20:36	
19	08:40 16:38	07:44 17:42	06:36 18:38		06:18 20:38	
20	08:39 16:40	07:41 17:44	06:33 18:40		06:16 20:40	
21	08:38 16:42	07:39 17:46	06:31 18:42		06:13 20:42	
22	08:36 16:44	07:37 17:48	06:28 18:44		06:11 20:44	
23	08:35 16:46	07:35 17:50	06:25 18:46		06:09 20:46	
24	08:33 16:48	07:32 17:52	06:23 18:48		06:06 20:48	
25	08:32 16:50	07:30 17:54	06:20 18:50		06:04 20:50	
26	08:30 16:52	07:28 17:56	06:18 18:52		06:02 20:52	
27	08:29 16:54	07:25 17:58	06:15 18:54	06:39 (5) 06:40 (5)	05:59 20:54	
28	08:27 16:56	07:23 18:00	06:13 18:56	06:37 (5) 06:41 (5)	05:57 20:56	
29	08:26 16:58		07:10 19:58	07:34 (5) 07:41 (5)	05:55 20:58	
30	08:24 17:00		07:08 20:00	07:32 (5) 07:41 (5)	05:53 21:00	
31	08:22 17:02		07:05 20:01	07:29 (5) 07:40 (5)	05:51 21:53	
Potential sun hours	244	270	366	422	499	517
Total, worst case		2	148	32		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,96	0,98	0,99		
Total reduction		0,24	0,33	0,39		
Total, real		0	49	12		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December	
1	04:54	05:36	06:33	07:01 (2)	07:29	07:56 (1)	08:27
	22:10	21:32	20:23	19:07	18:02 (1)	16:53	16:06
2	04:54	05:37	06:35	07:02 (2)	07:31	07:58 (1)	08:29
	22:09	21:30	20:20	19:04	18:01 (1)	16:51	16:05
3	04:55	05:39	06:36	07:33	07:33	07:34	08:31
	22:09	21:29	20:18	19:01	18:01	16:49	16:05
4	04:56	05:41	06:38	07:34	07:34	07:36	08:32
	22:08	21:27	20:15	18:59	18:01	16:47	16:04
5	04:57	05:43	06:40	07:36	07:36	07:38	08:34
	22:08	21:25	20:13	18:56	18:02	16:45	16:03
6	04:58	05:45	06:42	07:38	07:38	08:15 (6)	08:35
	22:07	21:23	20:10	18:54	18:03	16:43	16:03
7	04:59	05:46	06:44	07:40	07:40	08:13 (6)	08:36
	22:06	21:21	20:08	18:51	18:04	16:41	16:02
8	05:00	05:48	06:46	07:42	07:42	08:12 (6)	08:38
	22:06	21:18	20:05	18:49	18:05	16:39	16:02
9	05:01	05:50	06:48	07:44	07:44	08:12 (6)	08:39
	22:05	21:16	20:03	18:46	18:06	16:37	16:01
10	05:02	05:52	06:49	07:46	07:46	08:14 (6)	08:40
	22:04	21:14	20:00	18:44	18:07	16:35	16:01
11	05:03	05:54	06:51	07:48	07:48	08:16 (6)	08:41
	22:03	21:12	19:58	18:42	18:08	16:34	16:01
12	05:05	05:56	06:53	07:50	07:50	08:18 (6)	08:43
	22:02	21:10	19:55	18:39	18:09	16:32	16:00
13	05:06	05:57	06:55	07:52	07:52	08:20 (6)	08:44
	22:01	21:08	19:53	18:37	18:10	16:30	16:00
14	05:07	05:59	06:57	07:54	07:54	08:24 (6)	08:45
	22:00	21:06	19:50	18:34	18:11	16:28	16:00
15	05:09	06:01	06:59	07:56	07:56	08:26 (6)	08:46
	21:59	21:03	19:47	18:32	18:12	16:27	16:00
16	05:10	06:03	07:01	07:58	07:58	08:28 (6)	08:47
	21:58	21:01	19:45	18:29	18:13	16:25	16:00
17	05:11	06:05	07:02	08:00	08:00	08:30 (6)	08:47
	21:56	20:59	19:42	18:27	18:14	16:23	16:00
18	05:13	06:07	07:04	08:02	08:02	08:32 (6)	08:48
	21:55	20:57	19:40	18:25	18:15	16:22	16:00
19	05:14	06:09	07:06	08:04	08:04	08:34 (6)	08:49
	21:54	20:54	19:37	18:22	18:16	16:20	16:01
20	05:16	06:10	07:08	08:06	08:06	08:36 (6)	08:50
	21:52	20:52	19:35	18:20	18:17	16:19	16:01
21	05:17	06:12	07:10	08:08	08:08	08:38 (6)	08:50
	21:51	20:50	19:32	18:18	18:18	16:18	16:01
22	05:19	06:14	07:12	08:10	08:10	08:40 (6)	08:51
	21:49	20:47	19:30	18:15	18:19	16:16	16:02
23	05:20	06:16	07:14	08:12	08:12	08:42 (6)	08:51
	21:48	20:45	19:27	18:13	18:20	16:15	16:02
24	05:22	06:18	07:16	08:14	08:14	08:44 (6)	08:52
	21:46	20:42	19:24	18:11	18:21	16:14	16:03
25	05:24	06:20	07:17	08:16	08:16	08:46 (6)	08:52
	21:45	20:40	19:22	18:08	18:22	16:12	16:04
26	05:25	06:22	07:19	08:18	08:18	08:48 (6)	08:52
	21:43	20:38	19:19	18:06	18:23	16:11	16:04
27	05:27	06:23	07:21	08:20	08:20	08:50 (6)	08:53
	21:41	20:35	19:17	18:04	18:24	16:10	16:05
28	05:29	06:25	07:23	08:22	08:22	08:52 (6)	08:53
	21:40	20:33	19:14	18:02	18:25	16:09	16:06
29	05:30	06:27	07:25	08:24	08:24	08:54 (6)	08:53
	21:38	20:30	19:12	18:00	18:26	16:08	16:07
30	05:32	06:29	07:27	08:26	08:26	08:56 (6)	08:53
	21:36	20:28	19:09	18:00	18:27	16:07	16:08
31	05:34	06:31	07:29	08:28	08:28	08:58 (6)	08:53
	21:34	20:25	19:07	18:00	18:28	16:06	16:09
Potential sun hours	519	464	383	327	254	227	
Total, worst case		14	85	88			
Sun reduction		0,52	0,40	0,31			
Oper. time red.		1,00	1,00	1,00			
Wind dir. red.		0,98	0,99	0,97			
Total reduction		0,50	0,39	0,30			
Total, real		7	33	26			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: G - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (7)
Assumptions for shadow calculations
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	07:27 (5) 07:38 (5)	05:51 21:02	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:01 (2) 07:02 (2)	07:29 19:07	07:56 (1) 07:58 (1)	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (6) 20:05	07:27 (5) 07:35 (5)	05:48 21:03	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:31 19:04	07:31 19:04	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (6) 20:07	07:47 (6) 20:07	06:57 21:05	05:46 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	07:33 19:01	07:33 19:01	07:34 16:49	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (6) 20:09	07:47 (6) 20:09	06:55 21:07	05:44 21:58	04:55 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:34 18:59	07:34 18:59	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 20:11	07:47 (6) 20:11	06:52 21:09	05:45 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	07:36 18:56	07:36 18:56	07:38 16:45	08:34 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (6) 20:13	07:46 (6) 20:13	06:50 21:11	05:40 22:04	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	07:38 18:54	07:38 18:54	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	07:33 (6) 20:15	07:45 (6) 20:15	06:47 21:13	05:38 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	07:40 18:51	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	07:34 (6) 20:17	07:43 (6) 20:17	06:45 21:15	05:36 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	07:42 18:49	07:42 18:49	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:35 (6) 20:19	07:40 (6) 20:19	06:42 21:17	05:34 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:44 18:46	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	06:58 20:21	05:32 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:21 (5) 07:28 (5)	07:46 18:44	07:46 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:02 (2) 21:20	05:30 22:05	04:51 22:03	05:03 22:03	05:54 21:12	06:51 19:58	07:19 (5) 07:30 (5)	07:48 18:42	07:48 18:42	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	07:18 (1) 20:25	06:35 21:22	05:28 22:06	04:50 22:02	05:05 22:10	05:56 21:10	06:53 19:55	07:21 (5) 07:30 (5)	07:50 18:39	07:50 18:39	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	07:15 (1) 20:27	06:33 21:24	05:26 22:07	04:50 22:01	05:06 22:01	05:57 21:08	06:55 19:53	07:23 (5) 07:31 (5)	07:52 18:37	07:52 18:37	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	07:13 (1) 20:29	06:30 21:26	05:24 22:07	04:50 22:00	05:07 22:00	05:59 21:06	06:57 19:50	07:24 (5) 07:29 (5)	07:54 18:34	07:54 18:34	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	07:10 (1) 20:31	06:28 21:28	05:23 22:08	04:49 21:59	05:09 21:03	06:01 21:03	06:59 19:47	07:26 (5) 07:29 (5)	07:56 18:32	07:56 18:32	07:58 16:27	08:46 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	07:09 (1) 20:33	06:25 21:29	05:21 22:09	04:49 21:58	05:10 21:01	06:03 21:01	07:01 19:45	07:29 (5) 07:32 (5)	07:58 18:29	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	07:09 (1) 20:34	06:23 21:31	05:19 22:09	04:49 21:56	05:11 20:59	06:05 20:59	07:02 19:42	07:25 (5) 07:28 (5)	07:58 18:27	07:58 18:27	08:02 16:23	08:47 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	06:16 21:33	05:17 22:10	04:49 21:55	05:13 20:57	06:07 20:57	07:04 19:40	07:22 (5) 07:25 (5)	08:02 18:25	08:02 18:25	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	06:14 21:35	05:16 22:10	04:49 21:54	05:14 20:54	06:09 20:54	07:06 19:37	07:22 (5) 07:25 (5)	08:04 18:22	08:04 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	06:11 21:36	05:14 22:10	04:49 21:52	05:16 20:52	06:10 20:52	07:08 19:35	07:22 (5) 07:25 (5)	08:06 18:20	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	06:09 21:38	05:13 22:11	04:49 21:51	05:17 20:50	06:12 20:50	07:10 19:32	07:22 (5) 07:25 (5)	08:08 18:18	08:08 18:18	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	06:07 21:40	05:11 22:11	04:49 21:49	05:19 20:47	06:14 20:47	07:12 19:30	07:22 (5) 07:25 (5)	08:10 18:15	08:10 18:15	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	06:04 21:41	05:10 22:11	04:49 21:48	05:20 20:45	06:16 20:45	07:14 19:27	07:22 (5) 07:25 (5)	08:12 18:13	08:12 18:13	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	06:02 21:43	05:08 22:11	04:50 21:46	05:22 20:42	06:18 20:42	07:16 19:24	07:22 (5) 07:25 (5)	08:14 18:11	08:14 18:11	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	06:00 21:44	05:07 22:11	04:50 21:45	05:24 20:40	06:20 20:40	07:17 19:22	07:22 (5) 07:25 (5)	08:16 17:08	08:16 17:08	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:58 21:46	05:05 22:11	04:51 21:43	05:25 20:38	06:22 20:38	07:19 19:19	07:22 (5) 07:25 (5)	08:18 17:06	08:18 17:06	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:54 21:47	05:04 22:11	04:51 21:41	05:27 20:35	06:23 20:35	07:21 19:17	07:22 (5) 07:25 (5)	08:04 17:04	08:04 17:04	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	06:37 (5) 20:56	05:57 21:49	05:03 22:11	04:52 21:40	05:29 20:33	06:25 20:33	07:23 19:14	07:22 (5) 07:25 (5)	08:04 17:02	08:04 17:02	08:22 16:09	08:53 16:06
29	08:26 16:58	07:22 17:58	06:11 18:58	06:34 (5) 20:58	05:55 21:50	05:02 22:10	04:52 21:38	06:27 20:30	06:25 20:30	07:25 19:12	07:22 (5) 07:25 (5)	08:04 17:00	08:04 17:00	08:24 16:08	08:53 16:07
30	08:24 17:00	07:20 18:00	06:08 19:00	06:32 (5) 21:00	05:53 21:52	05:00 22:10	04:53 21:36	06:29 20:28	06:26 20:28	07:27 19:09	07:22 (5) 07:25 (5)	08:04 16:57	08:04 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02	07:18 18:01	06:05 19:01	06:35 (5) 21:00	05:53 21:53	05:00 22:10	04:53 21:34	06:29 20:25	06:26 20:25	07:27 19:09	07:22 (5) 07:25 (5)	08:04 16:55	08:04 16:55	08:27 16:09	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227			
Total, worst case			128	32				12		79	70				
Sun reduction			0,34	0,39				0,52		0,40	0,31				
Oper. time red.			1,00	1,00				1,00		1,00	1,00				
Wind dir. red.			0,98	0,99				0,98		1,00	0,97				
Total reduction			0,33	0,39				0,50		0,39	0,30				
Total, real			43	12				6		31	21				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)



SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04		07:20 18:02	21 17:32 (5)	07:02 20:03	28 19:17 (2)	21:01	25 20:25 (18)	21:54	30 21:09 (14)	20:39 (15)
2	08:53 16:11	08:19 17:06	4 16:29 (1)	07:18 18:04	20 17:32 (5)	20:05 21:03	29 19:17 (2)	21:03	25 20:25 (18)	21:56	30 21:09 (14)	20:39 (15)
3	08:52 16:13	08:17 17:08	7 16:35 (6)	07:15 18:06	20 17:31 (5)	06:57 20:07	30 19:17 (2)	21:05	26 20:25 (18)	21:57	30 21:09 (14)	20:39 (15)
4	08:52 16:14	08:15 17:10	10 16:27 (1)	07:13 18:08	19 17:31 (5)	06:55 20:09	31 19:17 (2)	21:07	26 20:25 (18)	21:58	31 21:10 (14)	20:39 (15)
5	08:52 16:15	08:13 17:12	14 16:40 (6)	07:11 18:10	16 17:29 (5)	06:52 20:11	30 19:17 (2)	21:09	26 20:25 (18)	21:59	30 21:10 (14)	20:39 (15)
6	08:51 16:16	08:11 17:14	16 16:26 (1)	07:08 18:12	14 17:28 (5)	06:50 20:13	30 19:16 (2)	21:11	25 20:24 (18)	22:00	30 21:09 (14)	20:39 (15)
7	08:51 16:18	08:09 17:16	19 16:45 (6)	07:06 18:14	9 17:25 (5)	06:47 20:15	29 19:16 (2)	21:13	25 20:24 (18)	22:01	31 21:10 (14)	20:39 (15)
8	08:50 16:19	08:07 17:18	18 16:44 (6)	07:03 18:16		06:45 20:17	28 19:14 (2)	21:15	24 20:23 (18)	22:02	31 21:10 (14)	20:39 (15)
9	08:49 16:21	08:05 17:20	17 16:44 (6)	07:01 18:18		06:42 20:19	27 19:14 (2)	21:17	22 20:22 (18)	22:03	30 21:10 (14)	20:40 (15)
10	08:49 16:22	08:03 17:23	15 16:41 (6)	06:58 18:20		06:40 20:21	25 19:12 (2)	21:18	22 20:23 (18)	22:04	31 21:10 (14)	20:39 (15)
11	08:48 16:24	08:01 17:25	13 16:40 (1)	06:56 18:22		06:37 20:23	22 19:11 (2)	21:20	19 20:21 (18)	22:05	30 21:10 (14)	20:40 (15)
12	08:47 16:26	07:59 17:27	10 16:39 (1)	06:53 18:24		06:35 20:25	19 19:09 (2)	21:22	18 20:20 (18)	22:06	30 21:10 (14)	20:40 (15)
13	08:46 16:27	07:57 17:29	5 16:32 (1)	06:51 18:26		06:32 20:27	15 18:52 (2)	21:24	16 20:19 (18)	22:07	30 21:10 (14)	20:41 (15)
14	08:45 16:29	07:55 17:31		06:48 18:28		06:30 20:29	9 19:04 (2)	21:26	12 20:18 (18)	22:07	30 21:10 (14)	20:40 (15)
15	08:44 16:31	07:52 17:33		06:46 18:30		06:28 20:30		21:28	7 20:15 (18)	22:08	30 21:10 (14)	20:40 (15)
16	08:43 16:32	07:50 17:35		06:43 18:32		06:25 20:32		21:29		22:08	30 21:11 (14)	20:41 (15)
17	08:42 16:34	07:48 17:37		06:41 18:34		06:23 20:34		21:31		22:09	30 21:11 (14)	20:41 (15)
18	08:41 16:36	07:46 17:39		06:38 18:36		06:20 20:36		21:33		22:09	30 21:11 (14)	20:41 (15)
19	08:40 16:38	07:44 17:41		06:35 18:38		06:18 20:38		21:34	7 21:00 (14)	22:10	30 21:11 (14)	20:41 (15)
20	08:39 16:40	07:41 17:43		06:33 18:40		06:15 20:40		21:36	11 21:02 (14)	22:10	30 21:11 (14)	20:41 (15)
21	08:37 16:42	07:39 17:46		06:30 18:42		06:13 20:42		21:38	16 21:03 (14)	22:10	30 21:11 (14)	20:41 (15)
22	08:36 16:44	07:37 17:48		06:28 18:44		06:11 20:44		21:39	19 21:04 (14)	22:11	30 21:12 (14)	20:42 (15)
23	08:35 16:45	07:34 17:50	3 17:18 (5)	06:25 18:46		06:08 20:46	6 20:17 (17)	21:41	22 21:06 (14)	22:11	30 21:12 (14)	20:42 (15)
24	08:33 16:47	07:32 17:52	7 17:23 (5)	06:23 18:48		06:06 20:48	10 20:19 (17)	21:43	24 21:06 (14)	22:11	30 21:12 (14)	20:42 (15)
25	08:32 16:49	07:30 17:54	11 17:25 (5)	06:20 18:50		06:04 20:50	14 20:20 (17)	21:44	24 21:06 (14)	22:11	30 21:13 (14)	20:43 (15)
26	08:30 16:51	07:27 17:56	15 17:13 (5)	06:18 18:52	9 18:00 (2)	06:02 20:52	17 20:22 (17)	21:46	26 21:07 (14)	22:11	30 21:13 (14)	20:43 (15)
27	08:29 16:53	07:25 17:58	17 17:12 (5)	06:15 18:54	16 18:12 (2)	05:59 20:54	20 20:23 (17)	21:47	27 21:08 (14)	22:11	29 21:13 (14)	20:44 (15)
28	08:27 16:55	07:23 18:00	20 17:12 (5)	06:13 18:56	20 18:14 (2)	05:57 20:56	22 20:24 (17)	21:49	28 21:08 (14)	22:11	30 21:13 (14)	20:43 (15)
29	08:25 16:57			07:10 19:57	23 19:15 (2)	05:55 20:58	24 20:25 (17)	21:50	28 21:08 (14)	22:10	30 21:14 (14)	20:44 (15)
30	08:24 17:00			07:07 19:59	25 19:16 (2)	05:53 21:00	24 20:25 (18)	21:52	29 21:09 (14)	22:10	31 21:14 (14)	20:43 (15)
31	08:22 17:02			07:05 20:01	27 19:16 (2)	04:59 21:53		21:53	30 21:09 (14)			
Potential sun hours	244	270		366		422		499		517		
Total, worst case				239		489		609		904		
Sun reduction			0,24	0,34		0,39		0,52		0,48		
Oper. time red.			1,00	1,00		1,00		1,00		1,00		
Wind dir. red.			0,85	0,96		0,99		0,92		0,87		
Total reduction			0,21	0,33		0,39		0,47		0,82		
Total, real			46	78		190		289		382		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
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Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: H - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (July to December) and rows for days (1 to 31). Each cell contains a matrix of values representing shadow calculations for that day. Includes a summary table at the bottom for 'Potential sun hours' and 'Total, worst case'.

Table layout: For each day in each month the following matrix apply

Matrix with 4 columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time).

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: I - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for time slots (08:53 to 17:02). Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 20:11	05:42 21:09	04:55 21:59	
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (6) 20:13	05:40 21:11	04:54 22:00	
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (6) 20:15	05:38 21:13	04:53 22:01	
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (6) 20:17	05:36 21:15	04:52 22:02	
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 20:19	05:34 21:17	04:52 22:03	
10	08:49 16:23	08:03 17:23	06:58 18:20	07:24 (6) 20:21	05:32 21:19	04:51 22:04	
11	08:48 16:24	08:01 17:25	06:56 18:22	07:25 (6) 20:23	05:30 21:20	04:51 22:05	
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:00 (2) 21:22	05:28 22:06	04:50 4 05:29 (15)
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	06:57 (2) 21:24	05:26 22:07	4 05:24 (15) 6 05:30 (15)
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	06:55 (2) 21:26	05:24 22:07	6 05:24 (15) 8 05:32 (15)
15	08:45 16:31	07:53 17:33	06:46 18:30	07:10 (1) 20:31	06:59 (2) 21:28	05:23 22:08	8 05:23 (15) 8 05:31 (15)
16	08:44 16:33	07:50 17:35	06:43 18:32	07:08 (1) 20:33	05:21 21:29	04:49 22:09	8 05:23 (15) 9 05:32 (15)
17	08:42 16:34	07:48 17:37	06:41 18:34	07:05 (1) 20:35	05:19 21:31	04:49 22:09	9 05:23 (15) 10 05:33 (15)
18	08:41 16:36	07:46 17:39	06:38 18:36	07:02 (1) 20:36	05:17 21:33	04:49 22:10	10 05:23 (15) 10 05:33 (15)
19	08:40 16:38	07:44 17:42	06:36 18:38	07:04 (1) 20:38	05:16 21:35	04:49 22:10	10 05:23 (15) 10 05:33 (15)
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	10 05:23 (15) 11 05:34 (15)
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	11 05:24 (15) 11 05:35 (15)
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	11 05:24 (15) 11 05:35 (15)
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	10 05:24 (15) 10 05:34 (15)
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	10 05:25 (15) 10 05:35 (15)
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	10 05:25 (15) 10 05:35 (15)
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	9 05:25 (15) 9 05:34 (15)
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	9 05:26 (15) 9 05:35 (15)
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	9 05:26 (15) 8 05:34 (15)
29	08:26 16:58	07:21 19:58	06:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	8 05:27 (15) 7 05:34 (15)
30	08:24 17:00	07:18 20:00	06:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	5 05:29 (15) 5 05:34 (15)
31	08:22 17:02	07:15 20:01	06:05 20:01	05:51 21:00	04:59 21:53	04:51 21:53	
Potential sun hours	244	270	366	422	499	517	
Total, worst case			79		8		166
Sun reduction			0,34		0,39		0,48
Oper. time red.			1,00		1,00		1,00
Wind dir. red.			0,98		0,97		0,77
Total reduction			0,34		0,39		0,38
Total, real			27		3		63

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Assumptions for shadow calculations

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December		
1	04:54	05:30 (15)	05:36	06:33	07:29	07:30	08:27	
	22:10	05:31 (15)	21:32	20:23	19:07	16:53	16:06	
2	04:54		05:37	06:35	07:31	08:06 (6)	07:32	08:29
	22:09		21:30	20:20	19:04	08:11 (6)	16:51	16:05
3	04:55		05:39	06:36	07:33	08:03 (6)	07:34	08:31
	22:09		21:29	20:18	19:01	08:13 (6)	16:49	16:05
4	04:56		05:41	06:38	07:34	08:02 (6)	07:36	08:32
	22:08		21:27	20:15	18:59	08:14 (6)	16:47	16:04
5	04:57		05:43	06:40	07:36	08:04 (6)	07:38	08:34
	22:08		21:25	20:13	18:56	08:14 (6)	16:45	16:03
6	04:58		05:45	06:42	07:38	08:06 (6)	07:40	08:35
	22:07		21:23	20:10	18:54	08:14 (6)	16:43	16:03
7	04:59		05:46	06:44	07:40	08:08 (6)	07:42	08:36
	22:06		21:21	20:08	18:51	08:13 (6)	16:41	16:02
8	05:00		05:48	06:46	07:42	08:10 (6)	07:44	08:38
	22:06		21:18	20:05	18:49	08:13 (6)	16:39	16:02
9	05:01		05:50	06:48	07:44		07:46	08:39
	22:05		21:16	20:03	18:46		16:37	16:01
10	05:02		05:52	06:50	07:46		07:48	08:40
	22:04		21:14	20:00	18:44		16:35	16:01
11	05:03		05:54	06:51	07:48		07:50	08:41
	22:03		21:12	19:58	18:42		16:34	16:01
12	05:05		05:56	06:53	07:50		07:52	08:43
	22:02		21:10	19:55	18:39		16:32	16:00
13	05:06		05:57	06:55	07:52		07:54	08:44
	22:01		21:08	19:53	18:37		16:30	16:00
14	05:07		05:59	06:57	07:54		07:56	08:45
	22:00		21:06	19:50	18:34		16:28	16:00
15	05:09		06:01	06:59	07:56		07:58	08:46
	21:59		21:03	19:47	18:32		16:27	16:00
16	05:10		06:03	07:01	07:58		08:00	08:47
	21:58		21:01	19:45	18:29		16:25	16:00
17	05:11		06:05	07:02	08:00		08:02	08:48
	21:56		20:59	19:42	18:27		16:24	16:00
18	05:13		06:07	07:04	08:02		08:04	08:48
	21:55		20:57	19:40	18:25		16:22	16:00
19	05:14		06:09	07:06	08:04		08:06	08:49
	21:54		20:54	19:37	18:22		16:20	16:01
20	05:16		06:10	07:08	08:06		08:08	08:50
	21:52		20:52	19:35	18:20		16:19	16:01
21	05:17		06:12	07:10	08:08		08:10	08:50
	21:51		20:50	19:32	18:18		16:18	16:01
22	05:19		06:14	07:12	08:10		08:12	08:51
	21:49		20:47	19:30	18:15		16:16	16:02
23	05:20		06:16	07:14	08:12		08:13	08:51
	21:48		20:45	19:27	18:13		16:15	16:02
24	05:22		06:18	07:16	07:49 (1)	08:14	08:15	08:52
	21:46		20:42	19:24	07:52 (1)	18:11	16:14	16:03
25	05:24		06:20	07:17	07:46 (1)	07:16	08:17	08:52
	21:45		20:40	19:22	07:54 (1)	17:08	16:12	16:04
26	05:25		06:22	07:19	07:46 (1)	07:18	08:19	08:52
	21:43		20:38	19:19	07:54 (1)	17:06	16:11	16:04
27	05:27		06:23	07:21	07:48 (1)	07:20	08:21	08:53
	21:41		20:35	19:17	07:54 (1)	17:04	16:10	16:05
28	05:29		06:25	07:23	07:50 (1)	07:22	08:22	08:53
	21:40		20:33	19:14	07:53 (1)	17:02	16:09	16:06
29	05:30		06:27	06:56 (2)	07:25		08:24	08:53
	21:38		20:30	07:00 (2)	07:12		16:08	16:07
30	05:32		06:29	06:58 (2)	07:27		08:26	08:53
	21:36		20:28	07:01 (2)	19:09		16:07	16:08
31	05:34		06:31	06:59 (2)		07:28		08:53
	21:34		20:25	07:00 (2)		16:55		16:09
Potential sun hours	519	464	383	327		254	227	
Total, worst case	1	8	28	53				
Sun reduction	0,49	0,52	0,40	0,31				
Oper. time red.	1,00	1,00	1,00	1,00				
Wind dir. red.	0,77	0,97	1,00	0,98				
Total reduction	0,38	0,51	0,40	0,31				
Total, real	0	4	11	16				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	
3	08:52 16:13	08:17 17:08	07:16 18:06	06:58 20:07	05:46 21:05	04:56 21:57	
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (6) 06:47 07:33 (6) 20:15	05:38 21:13	04:53 22:01	05:26 (15) 05:31 (15)
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (6) 06:45 07:33 (6) 20:17	05:36 21:15	04:52 22:02	05:26 (15) 05:33 (15)
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6) 06:42 07:32 (6) 20:19	05:34 21:17	04:52 22:03	05:25 (15) 05:34 (15)
10	08:49 16:23	08:03 17:23	06:58 18:20	07:23 (6) 06:40 07:32 (6) 20:21	05:32 21:19	04:51 22:04	05:25 (15) 05:35 (15)
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (6) 06:37 07:31 (6) 20:23	05:30 21:20	04:51 22:05	05:24 (15) 05:35 (15)
12	08:47 16:26	07:59 17:27	06:53 18:24	07:21 (6) 06:35 07:30 (6) 20:25	07:00 (2) 05:28 07:01 (2) 21:22	04:50 22:06	05:24 (15) 05:36 (15)
13	08:46 16:27	07:57 17:29	06:51 18:26	07:24 (6) 06:33 07:25 (6) 20:27	06:57 (2) 05:26 06:59 (2) 21:24	04:50 22:07	05:24 (15) 05:37 (15)
14	08:46 16:29	07:55 17:31	06:48 18:28	07:25 (6) 06:30 20:29	06:55 (2) 05:24 06:58 (2) 21:26	04:50 22:07	05:24 (15) 05:37 (15)
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:23 (15) 05:37 (15)
16	08:44 16:33	07:50 17:35	06:43 18:32	07:08 (1) 06:25 07:09 (1) 20:33	05:21 21:29	04:49 22:09	05:23 (15) 05:37 (15)
17	08:42 16:34	07:48 17:37	06:41 18:34	07:05 (1) 06:23 07:09 (1) 20:35	05:19 21:31	04:49 22:09	05:23 (15) 05:38 (15)
18	08:41 16:36	07:46 17:39	06:38 18:36	07:02 (1) 06:20 07:08 (1) 20:36	05:17 21:33	04:49 22:10	05:23 (15) 05:38 (15)
19	08:40 16:38	07:44 17:42	06:36 18:38	07:00 (1) 06:18 07:08 (1) 20:38	05:16 21:35	04:49 22:10	05:23 (15) 05:38 (15)
20	08:39 16:40	07:42 17:44	06:33 18:40	07:00 (1) 06:16 07:05 (1) 20:40	05:14 21:36	04:49 22:10	05:23 (15) 05:38 (15)
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:24 (15) 05:39 (15)
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:24 (15) 05:39 (15)
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:50 22:11	05:24 (15) 05:39 (15)
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:25 (15) 05:40 (15)
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:25 (15) 05:40 (15)
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 (15) 05:39 (15)
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:26 (15) 05:40 (15)
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:26 (15) 05:39 (15)
29	08:26 16:58	07:20 19:58	06:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:27 (15) 05:40 (15)
30	08:24 17:00	07:08 20:00	07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:28 (15) 05:40 (15)
31	08:22 17:02	07:05 20:01	07:05 20:01	05:51 21:00	04:59 21:53	04:53 22:10	05:28 (15) 05:40 (15)
Potential sun hours	244	270	366	422	499	517	
Total, worst case			68		6		309
Sun reduction			0,34		0,39		0,48
Oper. time red.			1,00		1,00		1,00
Wind dir. red.			0,99		0,97		0,77
Total reduction			0,34		0,39		0,38
Total, real			23		2		118

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:28 (15)	05:36	06:33	07:29	08:01 (6)	07:30	08:27
	22:10	05:39 (15)	21:32	20:23	19:07	08:08 (6)	16:53	16:06
2	04:54	05:29 (15)	05:37	06:35	07:31	07:59 (6)	07:32	08:29
	22:09	05:39 (15)	21:30	20:20	19:04	08:09 (6)	16:51	16:05
3	04:55	05:30 (15)	05:39	06:37	07:33	08:00 (6)	07:34	08:31
	22:09	05:39 (15)	21:29	20:18	19:01	08:10 (6)	16:49	16:05
4	04:56	05:31 (15)	05:41	06:38	07:34	08:02 (6)	07:36	08:32
	22:08	05:39 (15)	21:27	20:15	18:59	08:10 (6)	16:47	16:04
5	04:57	05:32 (15)	05:43	06:40	07:36	08:04 (6)	07:38	08:34
	22:08	05:38 (15)	21:25	20:13	18:56	08:10 (6)	16:45	16:03
6	04:58	05:32 (15)	05:45	06:42	07:38	08:06 (6)	07:40	08:35
	22:07	05:36 (15)	21:23	20:10	18:54	08:09 (6)	16:43	16:03
7	04:59		05:46	06:44	07:40		07:42	08:36
	22:06		21:21	20:08	18:51		16:41	16:02
8	05:00		05:48	06:46	07:42		07:44	08:38
	22:06		21:18	20:05	18:49		16:39	16:02
9	05:01		05:50	06:48	07:44		07:46	08:39
	22:05		21:16	20:03	18:46		16:37	16:01
10	05:02		05:52	06:50	07:46		07:48	08:40
	22:04		21:14	20:00	18:44		16:35	16:01
11	05:03		05:54	06:51	07:48		07:50	08:41
	22:03		21:12	19:58	18:42		16:34	16:01
12	05:05		05:56	06:53	07:50		07:52	08:43
	22:02		21:10	19:55	18:39		16:32	16:00
13	05:06		05:57	06:55	07:52		07:54	08:44
	22:01		21:08	19:53	18:37		16:30	16:00
14	05:07		05:59	06:57	07:54		07:56	08:45
	22:00		21:06	19:50	18:34		16:28	16:00
15	05:09		06:01	06:59	07:56		07:58	08:46
	21:59		21:03	19:48	18:32		16:27	16:00
16	05:10		06:03	07:01	07:58		08:00	08:47
	21:58		21:01	19:45	18:29		16:25	16:00
17	05:11		06:05	07:02	08:00		08:02	08:48
	21:56		20:59	19:42	18:27		16:24	16:00
18	05:13		06:07	07:04	08:02		08:04	08:48
	21:55		20:57	19:40	18:25		16:22	16:00
19	05:14		06:09	07:06	08:04		08:06	08:49
	21:54		20:54	19:37	18:22		16:20	16:01
20	05:16		06:10	07:08	08:06		08:08	08:50
	21:52		20:52	19:35	18:20		16:19	16:01
21	05:17		06:12	07:10	08:08		08:10	08:50
	21:51		20:50	19:32	18:18		16:18	16:01
22	05:19		06:14	07:12	08:10		08:12	08:51
	21:49		20:47	19:30	18:15		16:16	16:02
23	05:20		06:16	07:14	08:12		08:13	08:51
	21:48		20:45	19:27	2 07:46 (1)	18:13	16:15	16:02
24	05:22		06:18	07:16	08:14		08:15	08:52
	21:46		20:42	19:24	7 07:51 (1)	18:11	16:14	16:03
25	05:24		06:20	07:17	08:16		08:17	08:52
	21:45		20:40	19:22	7 07:52 (1)	17:08	16:12	16:04
26	05:25		06:22	07:19	08:18		08:19	08:52
	21:43		20:38	19:19	5 07:51 (1)	17:06	16:11	16:04
27	05:27		06:23	07:21	08:20		08:21	08:53
	21:41		20:35	19:17	2 07:50 (1)	17:04	16:10	16:05
28	05:29		06:25	07:23	08:22		08:22	08:53
	21:40		20:33	19:14	17:02		16:09	16:06
29	05:30		06:27	07:25	08:24		08:24	08:53
	21:38		20:30	3 06:56 (2)	17:00		16:08	16:07
30	05:32		06:29	07:27	08:26		08:26	08:53
	21:36		20:28	2 07:00 (2)	16:57		16:07	16:08
31	05:34		06:31	07:29	08:28		08:28	08:53
	21:34		20:25	1 07:00 (2)	16:55		16:09	16:09
Potential sun hours	519	464	383	327	254	227		
Total, worst case	48		6	23		44		
Sun reduction	0,49		0,52	0,40		0,31		
Oper. time red.	1,00		1,00	1,00		1,00		
Wind dir. red.	0,77		0,97	1,00		0,98		
Total reduction	0,38		0,51	0,40		0,31		
Total, real	18		3	9		13		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June
1	08:53	08:20	07:20	07:03	05:51	04:58
	16:10	17:04	18:02	20:03	21:02	21:54
2	08:53	08:19	07:18	07:00	05:48	04:57
	16:11	17:06	18:04	20:05	21:04	21:56
3	08:52	08:17	07:16	06:58	05:46	04:56
	16:13	17:08	18:06	20:07	21:05	21:57
4	08:52	08:15	07:13	06:55	05:44	04:55
	16:14	17:10	18:08	20:09	21:07	21:58
5	08:52	08:13	07:11	06:52	05:42	04:55
	16:15	17:12	18:10	20:11	21:09	21:59
6	08:51	08:11	07:08	06:50	05:40	04:54
	16:17	17:14	18:12	20:13	21:11	22:00
7	08:51	08:09	07:06	06:47	05:38	04:53
	16:18	17:16	18:14	20:15	21:13	22:01
8	08:50	08:07	07:03	06:45	05:36	04:52
	16:19	17:18	18:16	20:17	21:15	22:02
9	08:50	08:05	07:01	07:25 (6)	06:42	05:34
	16:21	17:21	18:18	07:28 (6)	20:19	21:17
10	08:49	08:03	06:58	07:23 (6)	06:40	05:32
	16:23	17:23	18:20	07:28 (6)	20:21	21:19
11	08:48	08:01	06:56	07:20 (6)	06:37	05:30
	16:24	17:25	18:22	07:28 (6)	20:23	21:20
12	08:47	07:59	06:53	07:18 (6)	06:35	05:28
	16:26	17:27	18:24	07:27 (6)	20:25	21:22
13	08:46	07:57	06:51	07:17 (6)	06:33	05:26
	16:27	17:29	18:26	07:25 (6)	20:27	21:24
14	08:46	07:55	06:48	07:20 (6)	06:30	05:24
	16:29	17:31	18:28	07:23 (6)	20:29	21:26
15	08:45	07:53	06:46	07:05 (1)	06:28	05:23
	16:31	17:33	18:30	07:06 (1)	20:31	21:28
16	08:44	07:50	06:43	07:02 (1)	06:25	05:21
	16:33	17:35	18:32	07:02 (1)	20:33	21:29
17	08:42	07:48	06:41	07:05 (1)	06:23	05:19
	16:34	17:37	18:34	07:06 (1)	20:35	21:31
18	08:41	07:46	06:38	07:02 (1)	06:20	05:17
	16:36	17:39	18:36	07:06 (1)	20:36	21:33
19	08:40	07:44	06:36	07:00 (1)	06:18	05:16
	16:38	17:42	18:38	07:06 (1)	20:38	21:35
20	08:39	07:42	06:33	06:57 (1)	06:16	05:14
	16:40	17:44	18:40	07:04 (1)	20:40	21:36
21	08:38	07:39	06:31	06:59 (1)	06:13	05:13
	16:42	17:46	18:42	07:02 (1)	20:42	21:38
22	08:36	07:37	06:28	07:02 (1)	06:11	05:11
	16:44	17:48	18:44	07:02 (1)	20:44	21:40
23	08:35	07:35	06:25	07:00 (1)	06:09	05:10
	16:46	17:50	18:46	07:00 (1)	20:46	21:41
24	08:33	07:32	06:23	06:57 (1)	06:06	05:08
	16:48	17:52	18:48	07:00 (1)	20:48	21:43
25	08:32	07:30	06:20	06:57 (1)	06:04	05:07
	16:50	17:54	18:50	07:00 (1)	20:50	21:44
26	08:30	07:28	06:18	06:57 (1)	06:02	05:05
	16:52	17:56	18:52	07:00 (1)	20:52	21:46
27	08:29	07:25	06:15	06:57 (1)	05:59	05:04
	16:54	17:58	18:54	07:00 (1)	20:54	21:47
28	08:27	07:23	06:13	06:57 (1)	05:57	05:03
	16:56	18:00	18:56	07:00 (1)	20:56	21:49
29	08:26	07:20	06:10	06:57 (1)	05:55	05:02
	16:58	18:04	19:00	07:00 (1)	20:58	21:50
30	08:24	07:18	06:08	06:57 (1)	05:53	05:00
	17:00	18:04	19:00	07:00 (1)	21:00	21:52
31	08:22	07:12	06:00	06:57 (1)	05:51	04:59
	17:02	18:06	19:02	07:00 (1)	21:02	21:53
Potential sun hours	244	270	366	422	499	517
Total, worst case			57	4		301
Sun reduction			0,34	0,39		0,48
Oper. time red.			1,00	1,00		1,00
Wind dir. red.			0,99	0,97		0,77
Total reduction			0,34	0,39		0,38
Total, real			20	2		115

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:29 (18)	05:36	06:33	07:29	07:30	08:27	
	22:10	05:40 (18)	21:32	20:23	19:07	08:06 (6)	16:53	16:06
2	04:54	05:30 (18)	05:37	06:35	07:31	07:58 (6)	07:32	08:29
	22:09	10 05:40 (18)	21:30	20:20	19:04	8 08:06 (6)	16:51	16:05
3	04:55	05:31 (18)	05:39	06:37	07:33	08:00 (6)	07:34	08:31
	22:09	8 05:39 (18)	21:29	20:18	19:01	6 08:06 (6)	16:49	16:05
4	04:56	05:33 (18)	05:41	06:38	07:34	08:02 (6)	07:36	08:32
	22:08	5 05:38 (18)	21:27	20:15	18:59	4 08:06 (6)	16:47	16:04
5	04:57		05:43	06:40	07:36	08:04 (6)	07:38	08:34
	22:08		21:25	20:13	18:56	1 08:05 (6)	16:45	16:03
6	04:58		05:45	06:42	07:38		07:40	08:35
	22:07		21:23	20:10	18:54		16:43	16:03
7	04:59		05:46	06:44	07:40		07:42	08:36
	22:06		21:21	20:08	18:51		16:41	16:02
8	05:00		05:48	06:46	07:42		07:44	08:38
	22:06		21:18	20:05	18:49		16:39	16:02
9	05:01		05:50	06:48	07:44		07:46	08:39
	22:05		21:16	20:03	18:46		16:37	16:01
10	05:02		05:52	06:50	07:46		07:48	08:40
	22:04		21:14	20:00	18:44		16:35	16:01
11	05:03		05:54	06:51	07:48		07:50	08:41
	22:03		21:12	19:58	18:42		16:34	16:01
12	05:05		05:56	06:53	07:50		07:52	08:43
	22:02		21:10	19:55	18:39		16:32	16:00
13	05:06		05:57	06:55	07:52		07:54	08:44
	22:01		21:08	19:53	18:37		16:30	16:00
14	05:07		05:59	06:57	07:54		07:56	08:45
	22:00		21:06	19:50	18:34		16:28	16:00
15	05:09		06:01	06:59	07:56		07:58	08:46
	21:59		21:03	19:48	18:32		16:27	16:00
16	05:10		06:03	07:01	07:58		08:00	08:47
	21:58		21:01	19:45	18:29		16:25	16:00
17	05:11		06:05	07:02	08:00		08:02	08:48
	21:56		20:59	19:42	18:27		16:24	16:00
18	05:13		06:07	07:04	08:02		08:04	08:48
	21:55		20:57	19:40	18:25		16:22	16:00
19	05:14		06:09	07:06	08:04		08:06	08:49
	21:54		20:54	19:37	18:22		16:20	16:01
20	05:16		06:10	07:08	08:06		08:08	08:50
	21:52		20:52	19:35	18:20		16:19	16:01
21	05:17		06:12	07:10	08:08		08:10	08:50
	21:51		20:50	19:32	18:18		16:18	16:01
22	05:19		06:14	07:12	08:10		08:12	08:51
	21:49		20:47	19:30	18:15		16:16	16:02
23	05:20		06:16	07:14	08:12		08:13	08:51
	21:48		20:45	19:27	6 07:48 (1)	18:13	16:15	16:02
24	05:22		06:18	07:16	07:43 (1)	08:14	08:15	08:52
	21:46		20:42	19:24	6 07:49 (1)	18:11	16:14	16:03
25	05:24		06:20	07:17	07:45 (1)	07:16	08:17	08:52
	21:45		20:40	19:22	4 07:49 (1)	17:08	16:12	16:04
26	05:25		06:22	07:19	07:46 (1)	07:18	08:19	08:52
	21:43		20:38	19:19	2 07:48 (1)	17:06	16:11	16:04
27	05:27		06:23	07:21	07:20		08:21	08:53
	21:41		20:35	19:17	17:04		16:10	16:05
28	05:29		06:25	07:23	07:22		08:22	08:53
	21:40		20:33	19:14	17:02		16:09	16:06
29	05:30		06:27	06:56 (2)	07:25		08:24	08:53
	21:38		20:30	2 06:58 (2)	19:12		16:08	16:07
30	05:32		06:29	06:58 (2)	07:27	07:57 (6)	08:26	08:53
	21:36		20:28	2 07:00 (2)	19:09	7 08:04 (6)	16:07	16:08
31	05:34		06:31			07:28		08:53
	21:34		20:25			16:55		16:09
Potential sun hours	519	464	383		327	254		227
Total, worst case	34		4	25		29		
Sun reduction	0,49		0,52	0,40		0,31		
Oper. time red.	1,00		1,00	1,00		1,00		
Wind dir. red.	0,77		0,97	0,99		0,99		
Total reduction	0,38		0,51	0,40		0,31		
Total, real	13		2	10		9		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66Shadow receptor: M - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Assumptions for shadow calculations
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31), showing sun rise and set times, potential sun hours, and various reduction metrics.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

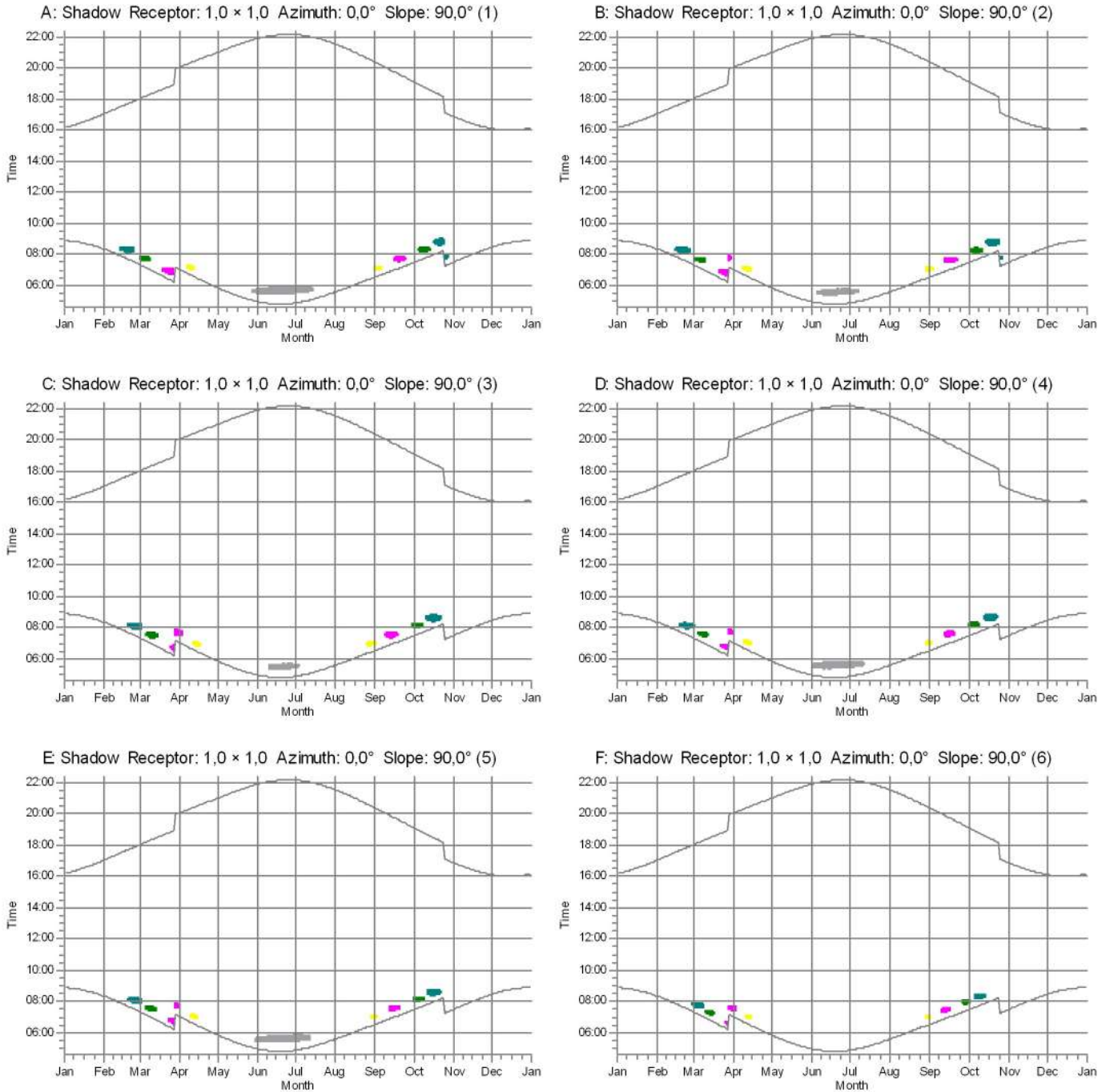
6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E66



WTGs

- 1: ENERCON E-66/20.70 2000 70.0 I-I hub: 85,0 m (TOT: 120,0 m) (1)
- 2: ENERCON E-66/20.70 2000 70.0 I-I hub: 85,0 m (TOT: 120,0 m) (2)
- 5: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)

- 6: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)
- 16: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (11)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ādakš raj.

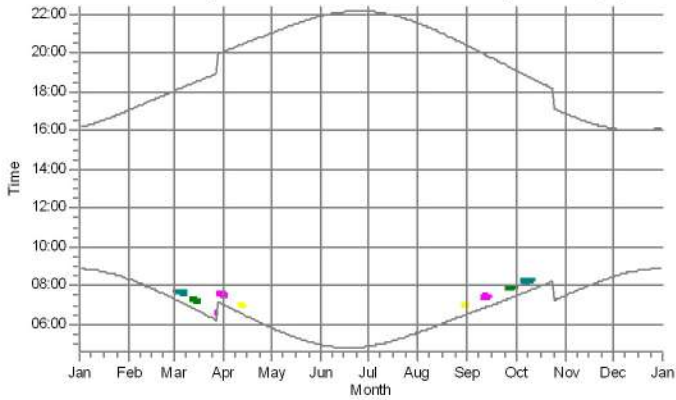
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Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

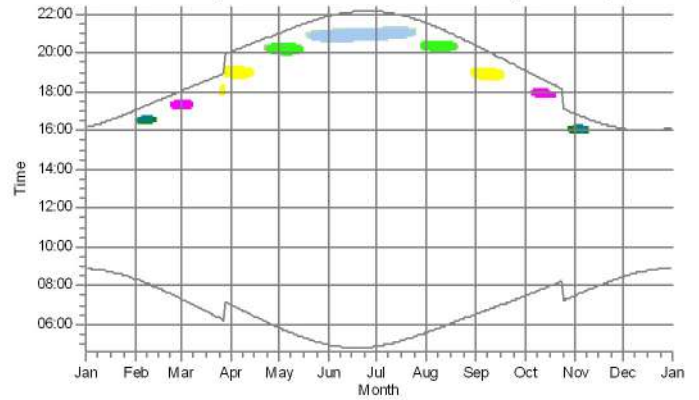
SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E66

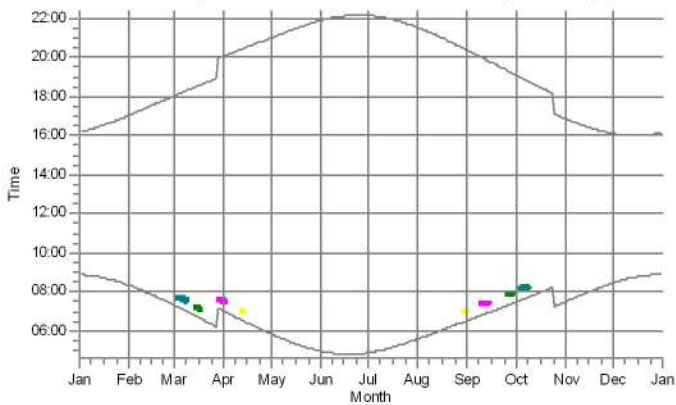
G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)



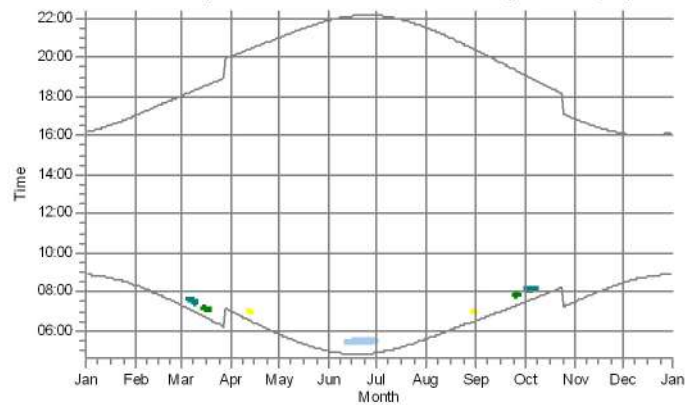
H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)



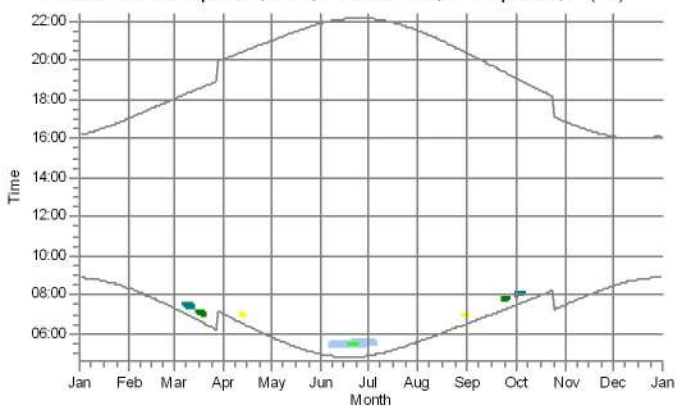
I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)



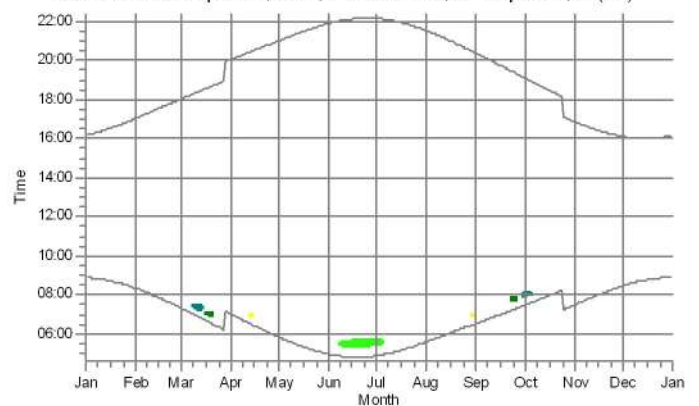
J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)



K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)



L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)



WTGs

- 1: ENERCON E-66/20.70 2000 70.0 I-I hub: 85,0 m (TOT: 120,0 m) (1)
- 2: ENERCON E-66/20.70 2000 70.0 I-I hub: 85,0 m (TOT: 120,0 m) (2)
- 5: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)

- 14: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (9)
- 15: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (10)
- 17: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (12)
- 18: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (13)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas

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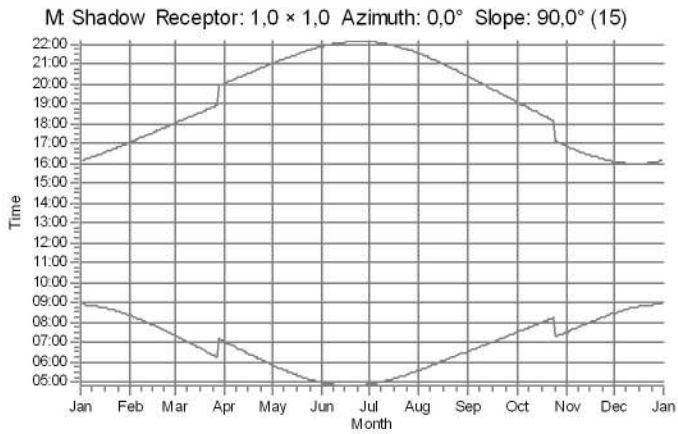
Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

2021.06.16 13:58/3.4.415

SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E66



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 1 - ENERCON E-66/20.70 2000 70.0 I-I hub: 85,0 m (TOT: 120,0 m) (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and multiple rows for days. Each cell contains time intervals (sunrise to sunset) and a final column for 'Sum'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 2 - ENERCON E-66/20.70 2000 70.0 I-I hub: 85,0 m (TOT: 120,0 m) (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day (1-31), showing sun rise/set times and shadow flicker minutes.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 3 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (7)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
1	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
2	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
3	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
4	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
5	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
6	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
7	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
8	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
9	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
10	16:22	17:22	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:41
11	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
12	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
13	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
14	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
15	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
16	16:32	17:35	18:32	20:32	21:29	22:09	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
17	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
18	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
19	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
20	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
21	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
22	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
23	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
24	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
25	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
26	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
27	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:22	08:22	08:53
28	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
29	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
30	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
31	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	0
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 4 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (8)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time

0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
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	16:31	17:33	18:30	20:30	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:02	16:09	16:06
29	08:25		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 5 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains sun rise and set times and minutes with flicker. Summary rows at the bottom show potential sun hours and sum of minutes with flicker for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 6 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (10)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (e.g., 08:53 | 17:04) and a numerical value representing shadow minutes. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 7 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns (January to December) and 31 rows (1 to 31). Each cell contains a time range (Sun rise to Sun set) for a specific day. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 8 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise, Sun set, First time with flicker, Last time with flicker). Summary rows at the bottom show Potential sun hours and Sum of minutes with flicker for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 9 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise, Sun set, First time with flicker, Last time with flicker). Summary rows at the bottom show Potential sun hours and Sum of minutes with flicker for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 10 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:18	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:10	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 11 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:29	06:25	07:23	08:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:11	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 12 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:03	05:51	04:58	04:53	05:36	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:07	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:19	20:05	18:49	16:39	16:02
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:47	07:57	06:51	06:33	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:35	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:42	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:31	06:13	05:13	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:18	16:18	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:30	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:16	08:14	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	07:16	08:17	08:52
	16:50	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:22	07:19	07:18	08:19	08:53
	16:52	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:54	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	07:22	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:02	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:11	21:38	20:30	19:12	17:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		20:00	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 13 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:03	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:13	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:22	07:19	07:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:29	06:25	07:23	07:22	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		20:00	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 14 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day (1-31). Each cell contains a 2x2 matrix of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each month's data.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 15 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 13 columns (January to December) and 31 rows (Day 1 to Day 31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each column.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 16 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (11)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 13 columns (months) and 31 rows (days). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and minutes with flicker. Includes a summary row at the bottom for 'Potential sun hours' and 'Sum of minutes with flicker'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 17 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (TOT: 240,0 m) (12)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 matrix of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each month column.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 13:58/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66WTG: 18 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (TOT: 240,0 m) (13)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 13 columns for months (January to December) and 13 rows for days (1 to 13). Each cell contains a 2x2 matrix of times (hh:mm) and a numerical value representing minutes with flicker.

Table layout: For each day in each month the following matrix apply

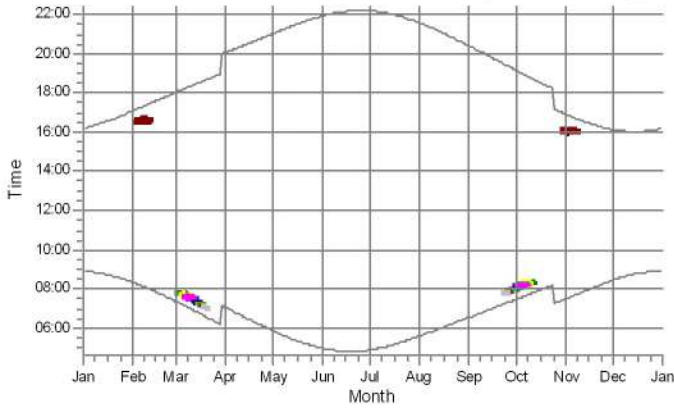
Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



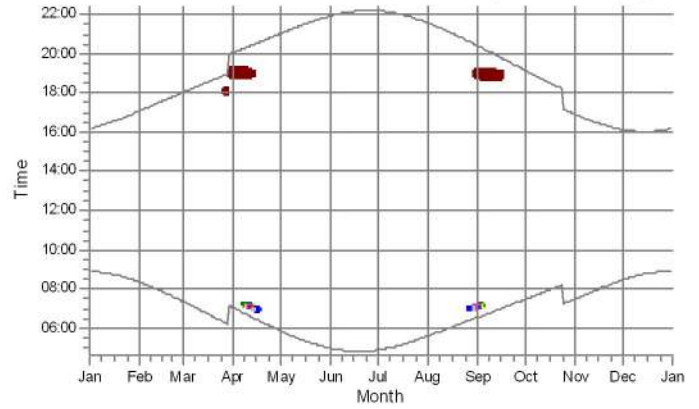
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E66

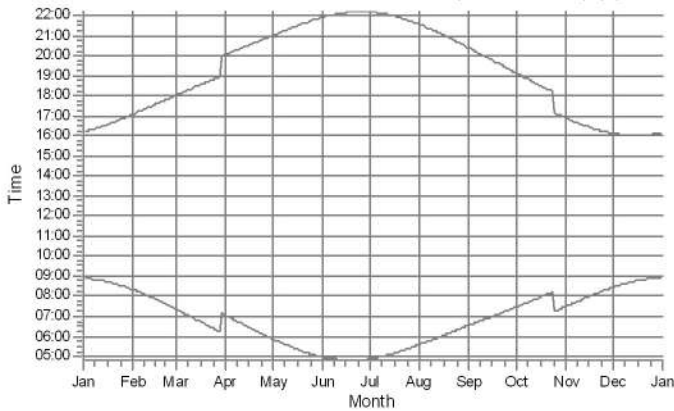
1: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)



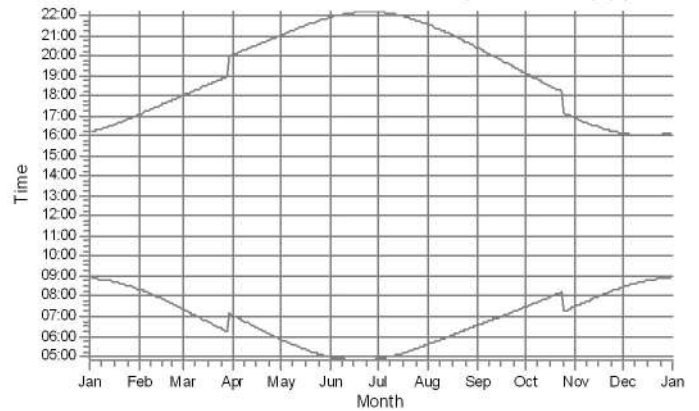
2: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)



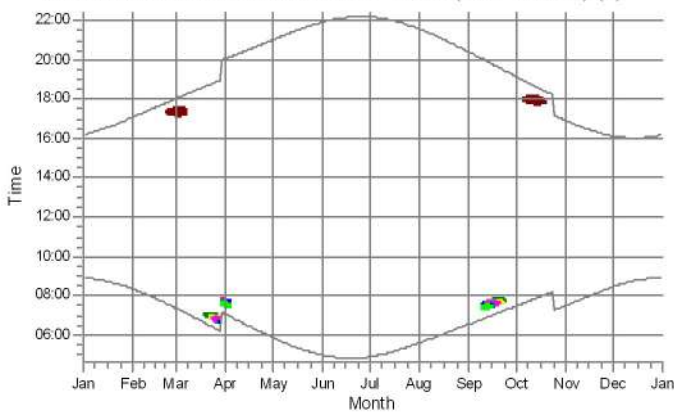
3: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)



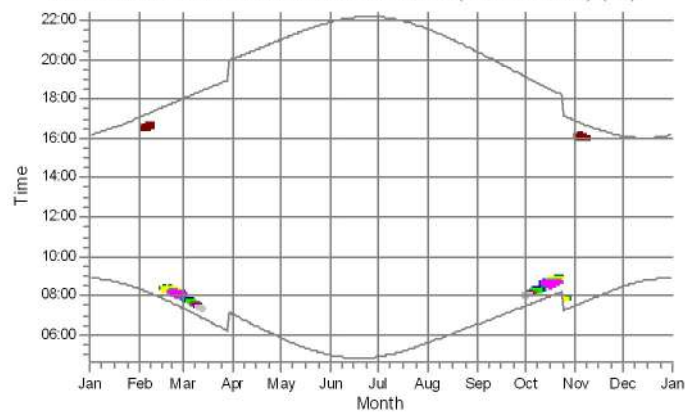
4: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)



5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)



6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)

- G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

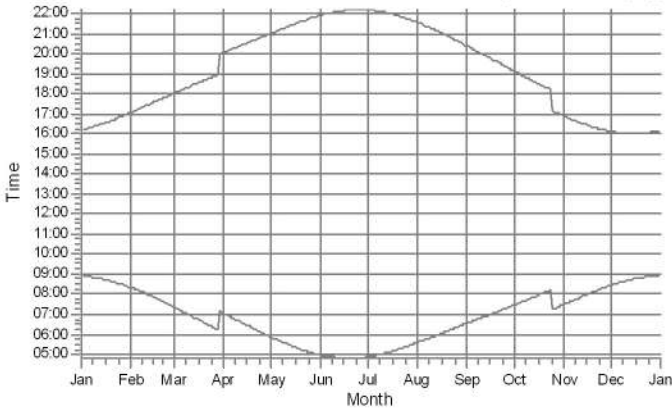
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Calculated:
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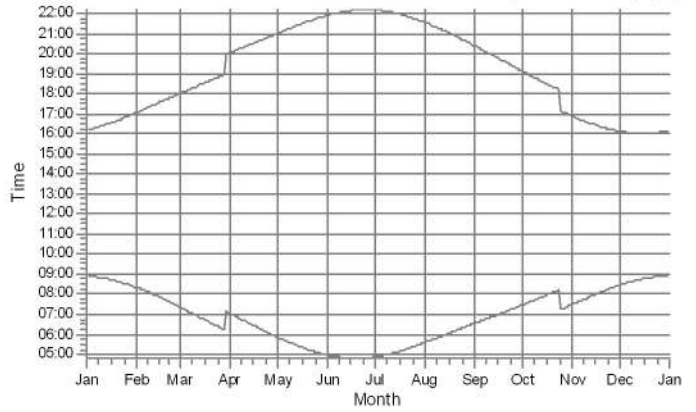
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E66

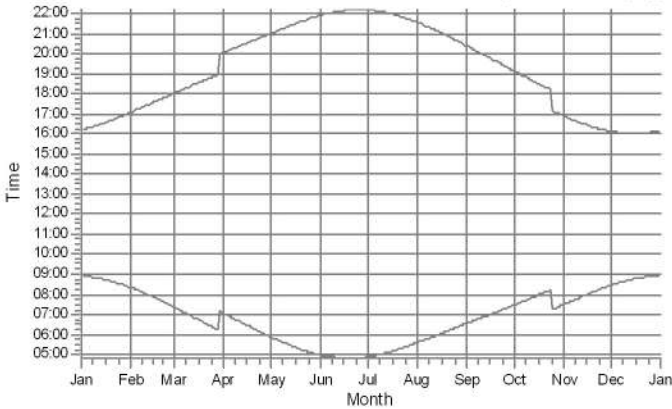
7: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)



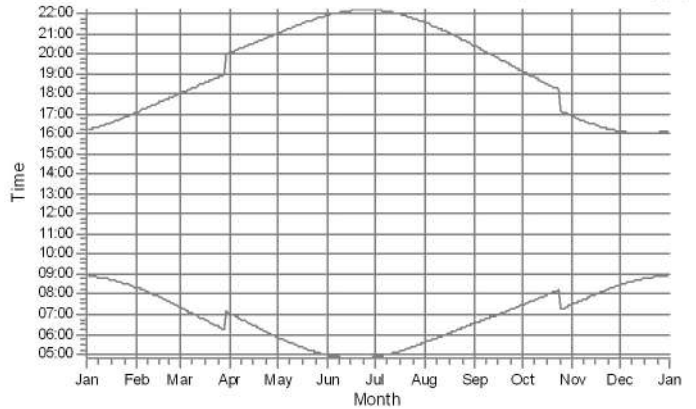
8: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)



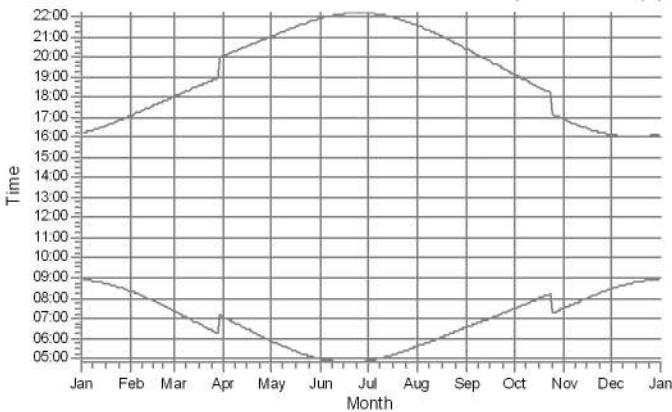
9: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)



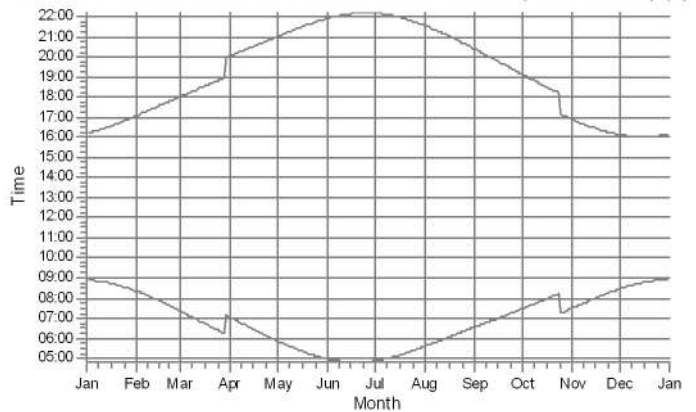
10: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)



11: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)



12: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)



Shadow receptors

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

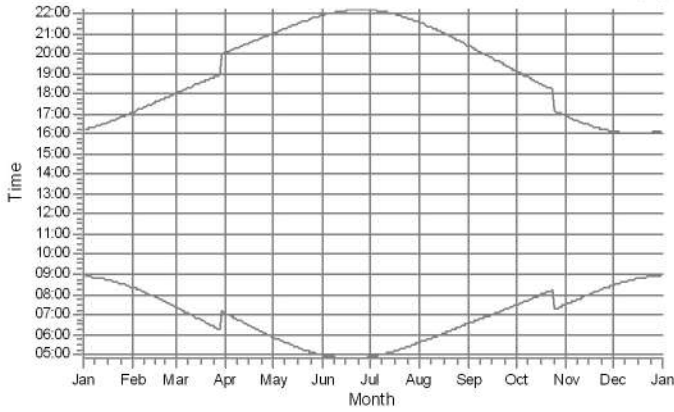
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Calculated:
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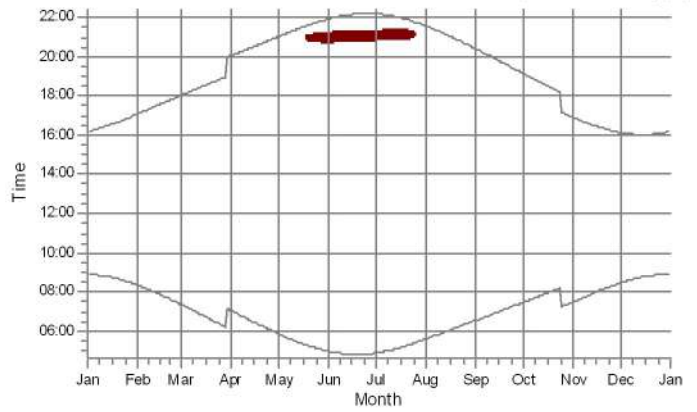
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E66

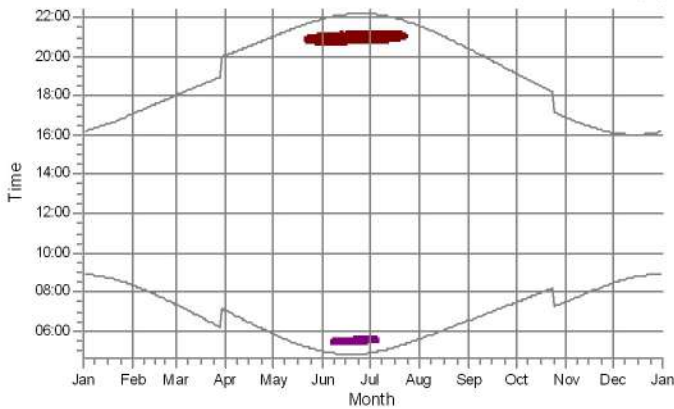
13: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (8)



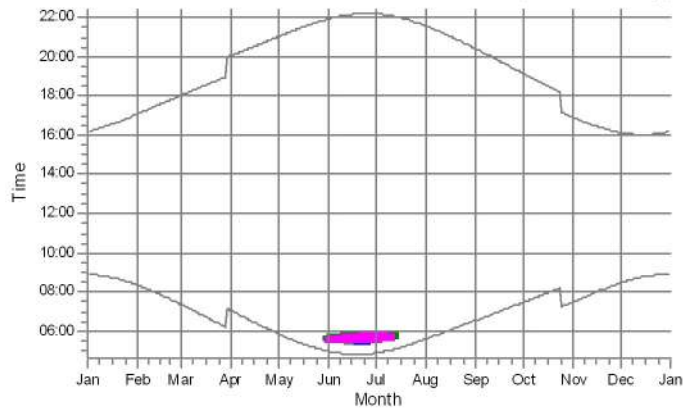
14: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (9)



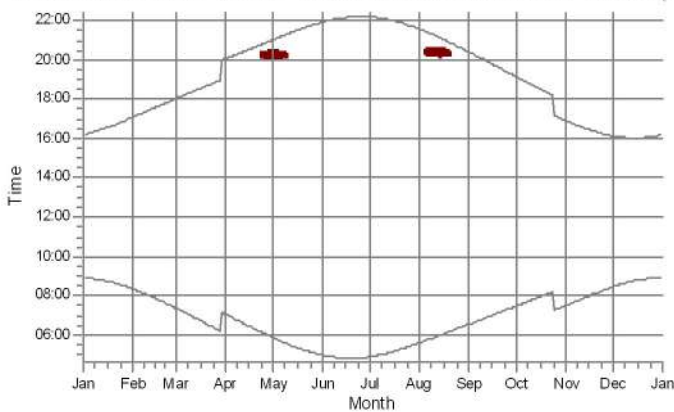
15: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (10)



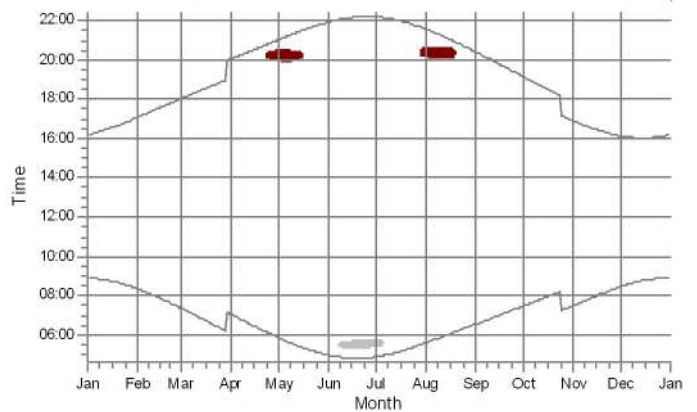
16: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (11)



17: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



18: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



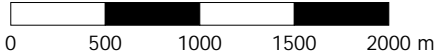
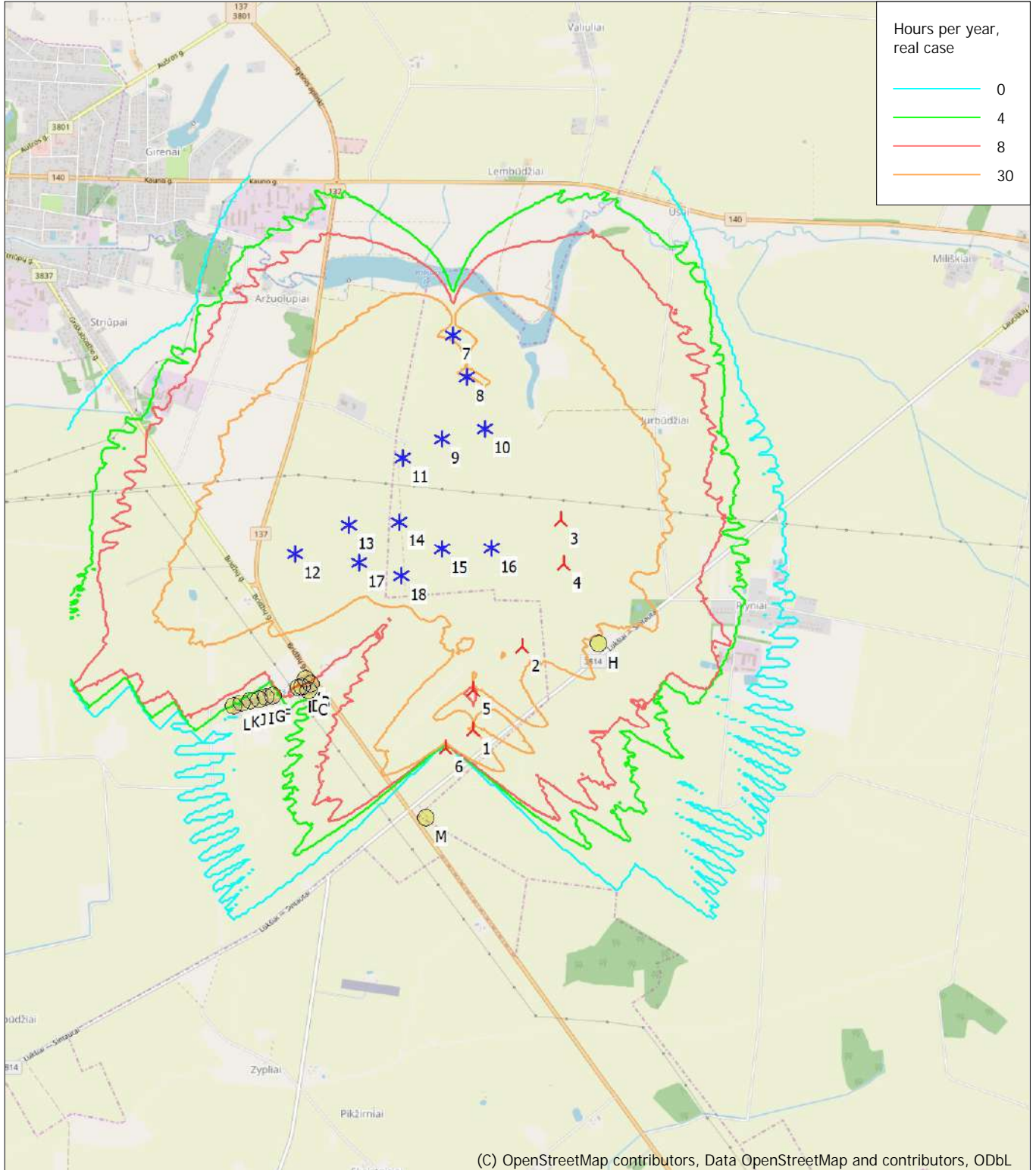
Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)

- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

SHADOW - Map

Calculation: Suminis poveikis Enercon E66



Map: EMD OpenStreetMap , Print scale 1:40.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 442.440 North: 6.088.240

New WTG
 Existing WTG
 Shadow receptor

Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Main Result

Calculation: Suminis poveikis Enercon E66 Shut down
Assumptions for shadow calculations

Maximum distance for influence
Calculate only when more than 20 % of sun is covered by the blade
Please look in WTG table

Minimum sun height over horizon for influence 3 °
Day step for calculation 1 days
Time step for calculation 1 minutes

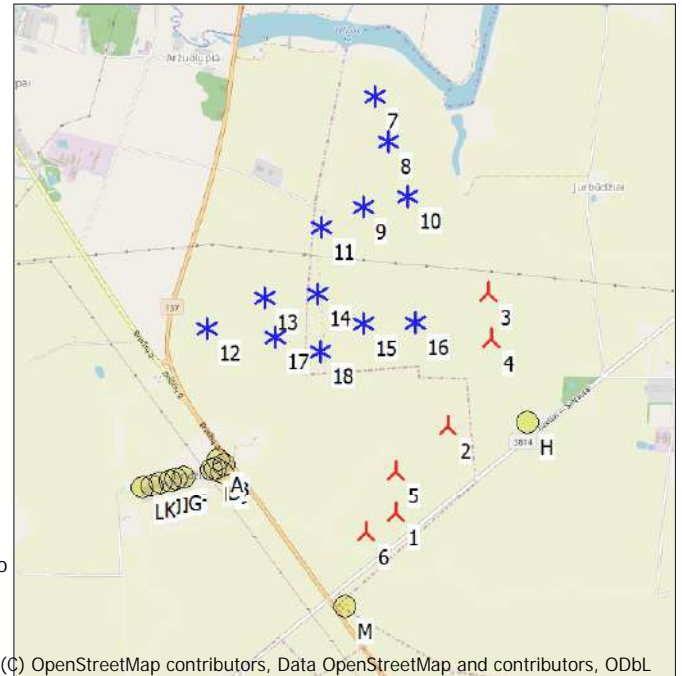
Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Flicker curtailment according to specified plan

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo
Obstacles used in calculation
Eye height for map: 1,5 m
Grid resolution: 1,0 m

All coordinates are in
Lithuanian TM LKS94-LKS94 (LT)



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL

Scale 1:50.000
New WTG Existing WTG Shadow receptor

WTGs

Y	X	Z	Row data/Description	WTG type		Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
				Valid	Manufact.					Calculation [m]	RPM [RPM]
			[m]								
1	442.261	6.087.347	50,0 ENERCON E-66/20.70...No	Yes	ENERCON	E-66/20.70-2.000	2.000	70,0	85,0	2.500	22,0
2	442.609	6.087.922	50,0 ENERCON E-66/20.70...No	Yes	ENERCON	E-66/20.70-2.000	2.000	70,0	85,0	2.500	22,0
3	442.891	6.088.803	50,3 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
4	442.908	6.088.497	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
5	442.265	6.087.626	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
6	442.058	6.087.221	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
7	442.152	6.090.108	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
8	442.241	6.089.811	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
9	442.064	6.089.378	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
10	442.365	6.089.446	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
11	441.791	6.089.249	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
12	441.022	6.088.592	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
13	441.405	6.088.791	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
14	441.755	6.088.807	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
15	442.055	6.088.609	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
16	442.405	6.088.612	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
17	441.469	6.088.526	50,0 GE WIND ENERGY 5....Yes	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0
18	441.767	6.088.429	50,0 GE WIND ENERGY 5....Yes	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0

Shadow receptor-Input

No.	Y	X	Z	Width [m]	Height [m]	Elevation a.g.l. [m]	Slope of window [°]	Direction mode	Eye height (ZVI) a.g.l. [m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

To be continued on next page...

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Main Result

Calculation: Suminis poveikis Enercon E66 Shut down

...continued from previous page

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Calculation Results

Shadow receptor

Shadow, expected values

No.	Shadow hours per year [h/year]	Avoided hours per year [h/year]
A*	9:06	0:12
B*	6:43	0:14
C*	5:24	0:13
D*	7:35	0:11
E*	7:54	0:10
F*	2:03	0:05
G*	1:48	0:04
H*	26:11	2:58
I*	1:36	0:03
J*	2:02	0:03
K*	3:05	0:02
L*	2:47	0:01
M	0:00	

* Receptors where shadow flicker is reduced by curtailment

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Stopped due to flicker curtailment [h/year]	Expected [h/year]
1	ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)	13:26		3:43
2	ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)	9:27	9:14	3:54
3	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)	0:00		0:00
4	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)	0:00		0:00
5	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)	14:21		4:46
6	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)	18:05		4:43
7	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)	0:00		0:00
8	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)	0:00		0:00
9	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)	0:00		0:00
10	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)	0:00		0:00
11	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)	0:00		0:00
12	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)	0:00		0:00
13	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)	0:00		0:00
14	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)	22:38		9:40
15	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)	32:58		13:47
16	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (11)	17:16		6:40
17	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)	8:59		4:11
18	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)	20:12		9:03

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53	08:20	07:20	07:46 (1)	07:03	05:51
	16:10	17:04	18:02	3 07:49 (1)	20:03	21:02
2	08:53	08:19	07:18	07:43 (1)	07:00	05:48
	16:11	17:06	18:04	7 07:50 (1)	20:05	21:03
3	08:52	08:17	07:16	07:41 (1)	06:57	05:46
	16:13	17:08	18:06	10 07:51 (1)	20:07	21:05
4	08:52	08:15	07:13	07:38 (1)	06:55	05:44
	16:14	17:10	18:08	12 07:50 (1)	20:09	21:07
5	08:52	08:13	07:11	07:37 (1)	06:52	05:42
	16:15	17:12	18:10	14 07:51 (1)	20:11	21:09
6	08:51	08:11	07:08	07:37 (1)	06:50	05:40
	16:17	17:14	18:12	12 07:49 (1)	20:13	21:11
7	08:51	08:09	07:06	07:38 (1)	06:47	05:38
	16:18	17:16	18:14	10 07:48 (1)	20:15	21:13
8	08:50	08:07	07:03	07:40 (1)	06:45	05:36
	16:19	17:18	18:16	6 07:46 (1)	20:17	21:15
9	08:50	08:05	07:01		06:42	05:34
	16:21	17:21	18:18		20:19	21:17
10	08:49	08:03	06:58		06:40	05:32
	16:22	17:23	18:20		20:21	21:19
11	08:48	08:01	06:56		06:37	05:30
	16:24	17:25	18:22		20:23	21:20
12	08:47	07:59	06:53		06:35	05:28
	16:26	17:27	18:24		20:25	21:22
13	08:46	07:57	06:51		06:33	05:26
	16:27	17:29	18:26		20:27	21:24
14	08:46	07:55	08:22 (6)	06:48	06:30	05:24
	16:29	17:31	3 08:25 (6)	18:28	20:29	21:26
15	08:45	07:53	08:19 (6)	06:46	06:28	05:23
	16:31	17:33	7 08:26 (6)	18:30	20:31	21:28
16	08:44	07:50	08:17 (6)	06:43	06:25	05:21
	16:33	17:35	10 08:27 (6)	18:32	20:33	21:29
17	08:42	07:48	08:15 (6)	06:41	06:23	05:19
	16:34	17:37	13 08:28 (6)	18:34	20:34	21:31
18	08:41	07:46	08:12 (6)	06:38	06:20	05:17
	16:36	17:39	15 08:27 (6)	18:36	20:36	21:33
19	08:40	07:44	08:10 (6)	06:36	07:00 (5)	06:18
	16:38	17:42	17 08:27 (6)	18:38	2 07:02 (5)	20:38
20	08:39	07:41	08:10 (6)	06:33	06:57 (5)	06:16
	16:40	17:44	18 08:28 (6)	18:40	6 07:03 (5)	20:40
21	08:38	07:39	08:10 (6)	06:31	06:55 (5)	06:13
	16:42	17:46	16 08:26 (6)	18:42	9 07:04 (5)	20:42
22	08:36	07:37	08:11 (6)	06:28	06:52 (5)	06:11
	16:44	17:48	15 08:26 (6)	18:44	11 07:03 (5)	20:44
23	08:35	07:35	08:12 (6)	06:25	06:50 (5)	06:09
	16:46	17:50	12 08:24 (6)	18:46	14 07:04 (5)	20:46
24	08:33	07:32	08:14 (6)	06:23	06:47 (5)	06:06
	16:48	17:52	8 08:22 (6)	18:48	16 07:03 (5)	20:48
25	08:32	07:30		06:20	06:47 (5)	06:04
	16:50	17:54		18:50	14 07:01 (5)	20:50
26	08:30	07:28		06:18	06:48 (5)	06:02
	16:52	17:56		18:52	13 07:01 (5)	20:52
27	08:29	07:25		06:15	06:49 (5)	05:59
	16:54	17:58		18:54	9 06:58 (5)	20:54
28	08:27	07:23		06:13		05:57
	16:56	18:00		18:56		20:56
29	08:26			07:10	05:55	05:02
	16:58			19:58	20:58	21:50
30	08:24			07:08	05:53	05:00
	17:00			20:00	21:52	8 05:42 (16)
31	08:22			07:05	04:59	05:33 (16)
	17:02			20:01	21:53	11 05:44 (16)
Potential sun hours	244	270	366	422	499	517
Total, worst case			134	168	23	620
Sun reduction			0,24	0,34	0,52	0,48
Oper. time red.			1,00	1,00	1,00	1,00
Wind dir. red.			0,91	0,98	0,80	0,80
Total reduction			0,23	0,34	0,42	0,39
Total, real			30	57	10	245

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December				
1	04:54	05:33 (16)	05:36	06:33	07:03 (2)	07:29	07:30	08:27		
	22:10	05:55 (16)	21:32	20:23	07:11 (2)	19:07	16:53	16:06		
2	04:54	05:34 (16)	05:37	06:35	07:03 (2)	07:31	07:32	08:29		
	22:09	05:55 (16)	21:30	20:20	07:12 (2)	19:04	16:51	16:05		
3	04:55	05:35 (16)	05:39	06:36	07:05 (2)	07:32	07:34	08:30		
	22:09	05:55 (16)	21:29	20:18	07:12 (2)	19:01	16:49	16:05		
4	04:56	05:35 (16)	05:41	06:38	07:06 (2)	07:34	07:36	08:32		
	22:08	05:55 (16)	21:27	20:15	07:11 (2)	18:59	16:47	16:04		
5	04:57	05:36 (16)	05:43	06:40	07:08 (2)	07:36	08:19 (1)	07:38	08:34	
	22:08	05:55 (16)	21:25	20:13	07:11 (2)	18:56	2	08:21 (1)	16:45	16:03
6	04:58	05:35 (16)	05:45	06:42	07:38	08:15 (1)	07:40	08:35		
	22:07	05:54 (16)	21:23	20:10	18:54	9	08:24 (1)	16:43	16:03	
7	04:59	05:36 (16)	05:46	06:44	07:40	08:14 (1)	07:42	08:36		
	22:06	05:54 (16)	21:21	20:08	18:51	11	08:25 (1)	16:41	16:02	
8	05:00	05:37 (16)	05:48	06:46	07:42	08:13 (1)	07:44	08:38		
	22:06	05:54 (16)	21:18	20:05	18:49	13	08:26 (1)	16:39	16:02	
9	05:01	05:37 (16)	05:50	06:48	07:44	08:12 (1)	07:46	08:39		
	22:05	05:54 (16)	21:16	20:03	18:46	14	08:26 (1)	16:37	16:01	
10	05:02	05:38 (16)	05:52	06:49	07:46	08:14 (1)	07:48	08:40		
	22:04	05:53 (16)	21:14	20:00	18:44	11	08:25 (1)	16:35	16:01	
11	05:03	05:40 (16)	05:54	06:51	07:48	08:16 (1)	07:50	08:41		
	22:03	05:54 (16)	21:12	19:58	18:41	8	08:24 (1)	16:34	16:01	
12	05:05	05:41 (16)	05:55	06:53	07:50	08:18 (1)	07:52	08:43		
	22:02	05:53 (16)	21:10	19:55	18:39	5	08:23 (1)	16:32	16:00	
13	05:06	05:42 (16)	05:57	06:55	07:52	08:20 (1)	07:54	08:44		
	22:01	05:51 (16)	21:08	19:53	18:37	1	08:21 (1)	16:30	16:00	
14	05:07	05:43 (16)	05:59	06:57	07:54	07:56	07:56	08:45		
	22:00	05:50 (16)	21:06	19:50	18:34	16:28	16:28	16:00		
15	05:08	06:01	06:59	07:56	07:58	07:58	08:46			
	21:59	21:03	19:47	18:32	16:27	16:00				
16	05:10	06:03	07:01	07:58	08:00	08:47				
	21:58	21:01	19:45	8	07:47 (5)	18:29	16:25	16:00		
17	05:11	06:05	07:02	07:37 (5)	08:00	08:48 (6)	08:02	08:47		
	21:56	20:59	19:42	12	07:49 (5)	18:27	3	08:51 (6)	16:23	16:00
18	05:13	06:07	07:04	07:36 (5)	08:02	08:44 (6)	08:04	08:48		
	21:55	20:57	19:40	14	07:50 (5)	18:25	10	08:54 (6)	16:22	16:00
19	05:14	06:08	07:06	07:34 (5)	08:04	08:42 (6)	08:06	08:49		
	21:54	20:54	19:37	15	07:49 (5)	18:22	14	08:56 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:41 (6)	08:08	08:50		
	21:52	20:52	19:35	14	07:49 (5)	18:20	16	08:57 (6)	16:19	16:01
21	05:17	06:12	07:10	07:37 (5)	08:08	08:40 (6)	08:10	08:50		
	21:51	20:50	19:32	12	07:49 (5)	18:18	17	08:57 (6)	16:18	16:01
22	05:19	06:14	07:12	07:39 (5)	08:10	08:40 (6)	08:12	08:51		
	21:49	20:47	19:30	9	07:48 (5)	18:15	18	08:58 (6)	16:16	16:02
23	05:20	06:16	07:14	07:41 (5)	08:12	08:41 (6)	08:13	08:51		
	21:48	20:45	19:27	7	07:48 (5)	18:13	17	08:58 (6)	16:15	16:02
24	05:22	06:18	07:16	07:43 (5)	08:14	08:43 (6)	08:15	08:52		
	21:46	20:42	19:24	3	07:46 (5)	18:11	14	08:57 (6)	16:14	16:03
25	05:24	06:20	07:17	07:16	07:16	07:45 (6)	08:17	08:52		
	21:45	20:40	19:22	17:08	12	07:57 (6)	16:12	16:04		
26	05:25	06:22	07:19	07:18	07:18	07:47 (6)	08:19	08:52		
	21:43	20:38	19:19	17:06	9	07:56 (6)	16:11	16:04		
27	05:27	06:23	07:21	07:20	07:20	07:49 (6)	08:21	08:53		
	21:41	20:35	19:17	17:04	6	07:55 (6)	16:10	16:05		
28	05:29	06:25	07:23	07:22	07:22	07:52 (6)	08:22	08:53		
	21:40	20:33	19:14	17:02	2	07:54 (6)	16:09	16:06		
29	05:30	06:27	07:25	07:24	07:24	08:24	08:24	08:53		
	21:38	20:30	19:12	17:00	16:08	16:07				
30	05:32	06:29	07:27	07:26	08:26	08:53				
	21:36	20:28	19:09	16:57	16:07	16:08				
31	05:34	06:31	07:06 (2)	07:28	08:53					
	21:34	20:25	3	07:09 (2)	16:55	16:09				
Potential sun hours	519	464	383	327	254	227				
Total, worst case	230	3	126	212						
Sun reduction	0,49	0,52	0,40	0,31						
Oper. time red.	1,00	1,00	1,00	1,00						
Wind dir. red.	0,80	0,98	1,00	0,93						
Total reduction	0,40	0,52	0,40	0,29						
Total, real	91	2	50	61						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June			
1	08:53	08:20	07:20	07:03	05:51	04:58			
	16:10	17:04	18:02	20:03	21:02	21:54			
2	08:53	08:19	07:18	07:00	05:48	04:57			
	16:11	17:06	18:04	20:05	21:03	21:56			
3	08:52	08:17	07:16	07:41 (1)	06:57	05:46	04:56		
	16:13	17:08	18:06	5 07:46 (1)	20:07	21:05	21:57		
4	08:52	08:15	07:13	07:38 (1)	06:55	05:44	04:55		
	16:14	17:10	18:08	8 07:46 (1)	20:09	21:07	21:58		
5	08:52	08:13	07:11	07:36 (1)	06:52	05:42	04:55		
	16:15	17:12	18:10	11 07:47 (1)	20:11	21:09	21:59		
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40	04:54	05:29 (16)	
	16:17	17:14	18:12	14 07:47 (1)	20:13	21:11	22:00	7 05:36 (16)	
7	08:51	08:09	07:06	07:32 (1)	06:47	05:38	04:53	05:28 (16)	
	16:18	17:16	18:14	14 07:46 (1)	20:15	21:13	22:01	9 05:37 (16)	
8	08:50	08:07	07:03	07:33 (1)	06:45	05:36	04:52	05:27 (16)	
	16:19	17:18	18:16	13 07:46 (1)	20:17	21:15	22:02	11 05:38 (16)	
9	08:50	08:05	07:01	07:33 (1)	06:42	05:34	04:52	05:27 (16)	
	16:21	17:21	18:18	11 07:44 (1)	20:19	21:17	22:03	12 05:39 (16)	
10	08:49	08:03	06:58	07:35 (1)	06:40	05:32	04:51	05:27 (16)	
	16:22	17:23	18:20	8 07:43 (1)	20:21	21:19	22:04	13 05:40 (16)	
11	08:48	08:01	06:56	06:37	05:30	04:51	05:26 (16)		
	16:24	17:25	18:22	20:23	21:20	22:05	14 05:40 (16)		
12	08:47	07:59	06:53	06:35	05:28	04:50	05:26 (16)		
	16:26	17:27	18:24	20:25	21:22	22:06	15 05:41 (16)		
13	08:46	07:57	06:51	06:33	05:26	04:50	05:26 (16)		
	16:27	17:29	18:26	20:27	21:24	22:07	16 05:42 (16)		
14	08:46	07:55	06:48	06:30	05:24	04:50	05:25 (16)		
	16:29	17:31	18:28	20:29	21:26	22:07	16 05:41 (16)		
15	08:45	07:53	08:19 (6)	06:46	06:28	05:23	04:49	05:25 (16)	
	16:31	17:33	2 08:21 (6)	18:30	20:31	21:28	22:08	17 05:42 (16)	
16	08:44	07:50	08:17 (6)	06:43	06:25	05:21	04:49	05:26 (16)	
	16:33	17:35	6 08:23 (6)	18:32	20:33	21:29	22:09	16 05:42 (16)	
17	08:42	07:48	08:15 (6)	06:41	06:23	05:19	04:49	05:26 (16)	
	16:34	17:37	9 08:24 (6)	18:34	20:34	21:31	22:09	17 05:43 (16)	
18	08:41	07:46	08:12 (6)	06:38	06:20	05:17	04:49	05:26 (16)	
	16:36	17:39	12 08:24 (6)	18:36	20:36	21:33	22:10	17 05:43 (16)	
19	08:40	07:44	08:10 (6)	06:36	06:18	05:16	04:49	05:26 (16)	
	16:38	17:42	15 08:25 (6)	18:38	20:38	21:35	22:10	17 05:43 (16)	
20	08:39	07:41	08:08 (6)	06:33	06:16	05:14	04:49	05:26 (16)	
	16:40	17:44	18 08:26 (6)	18:40	20:40	21:36	22:10	17 05:43 (16)	
21	08:38	07:39	08:06 (6)	06:31	06:13	05:13	04:49	05:27 (16)	
	16:42	17:46	19 08:25 (6)	18:42	20:42	21:38	22:11	18 05:45 (16)	
22	08:36	07:37	08:07 (6)	06:28	06:11	05:11	04:49	05:27 (16)	
	16:44	17:48	18 08:25 (6)	18:44	4 06:56 (5)	20:44	21:40	22:11	17 05:44 (16)
23	08:35	07:35	08:07 (6)	06:25	06:50 (5)	06:09	05:10	04:49	05:27 (16)
	16:46	17:50	17 08:24 (6)	18:46	8 06:58 (5)	20:46	21:41	22:11	17 05:44 (16)
24	08:33	07:32	08:08 (6)	06:23	06:47 (5)	06:06	05:08	04:50	05:27 (16)
	16:48	17:52	15 08:23 (6)	18:48	11 06:58 (5)	20:48	21:43	22:11	17 05:44 (16)
25	08:32	07:30	08:08 (6)	06:20	06:44 (5)	06:04	05:07	04:50	05:28 (16)
	16:50	17:54	13 08:21 (6)	18:50	13 06:57 (5)	20:50	21:44	22:11	17 05:45 (16)
26	08:30	07:28	08:11 (6)	06:18	06:42 (5)	06:02	05:05	04:51	05:28 (16)
	16:52	17:56	8 08:19 (6)	18:52	15 06:57 (5)	20:52	21:46	22:11	17 05:45 (16)
27	08:29	07:25	06:15	06:40 (5)	05:59	05:04	04:51	05:28 (16)	
	16:54	17:58	16 18:54	19:58	16 06:56 (5)	20:54	21:47	22:11	17 05:45 (16)
28	08:27	07:23	06:13	06:41 (5)	05:57	05:03	04:52	05:28 (16)	
	16:56	18:00	15 18:56	19:58	15 06:56 (5)	20:56	21:49	22:11	17 05:45 (16)
29	08:26		07:10	07:41 (5)	05:55	05:02	04:52	05:29 (16)	
	16:58		13 19:58	07:54 (5)	20:58	21:50	22:10	16 05:45 (16)	
30	08:24		07:08	07:43 (5)	05:53	05:00	04:53	05:30 (16)	
	17:00		20:00	9 07:52 (5)	21:00	21:52	22:10	15 05:45 (16)	
31	08:22		07:05			04:59			
	17:02		20:01			21:53			
Potential sun hours	244	270	366	422	499	517			
Total, worst case			152	188					382
Sun reduction			0,24	0,34					0,48
Oper. time red.			1,00	1,00					1,00
Wind dir. red.			0,91	0,99					0,78
Total reduction			0,23	0,34					0,39
Total, real			35	64					147

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
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2021.06.16 14:44/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

		July		August		September		October		November		December	
1	04:54		05:30 (16)	05:36		06:33		07:01 (2)	07:29		07:30		08:27
	22:10	14	05:44 (16)	21:32		20:23	7	07:08 (2)	19:07		16:53		16:06
2	04:54		05:31 (16)	05:37		06:35		07:03 (2)	07:31		07:32		08:29
	22:09	13	05:44 (16)	21:30		20:20	4	07:07 (2)	19:04		16:51		16:05
3	04:55		05:32 (16)	05:39		06:36		07:05 (2)	07:32		08:15 (1)	07:34	08:30
	22:09	12	05:44 (16)	21:29		20:18	1	07:06 (2)	19:01	4	08:19 (1)	16:49	16:05
4	04:56		05:33 (16)	05:41		06:38			07:34		08:12 (1)	07:36	08:32
	22:08	11	05:44 (16)	21:27		20:15			18:59	10	08:22 (1)	16:47	16:04
5	04:57		05:34 (16)	05:43		06:40			07:36		08:10 (1)	07:38	08:33
	22:08	10	05:44 (16)	21:25		20:13			18:56	12	08:22 (1)	16:45	16:03
6	04:58		05:34 (16)	05:45		06:42			07:38		08:10 (1)	07:40	08:35
	22:07	8	05:42 (16)	21:23		20:10			18:54	13	08:23 (1)	16:43	16:03
7	04:59		05:36 (16)	05:46		06:44			07:40		08:09 (1)	07:42	08:36
	22:06	4	05:40 (16)	21:21		20:08			18:51	14	08:23 (1)	16:41	16:02
8	05:00			05:48		06:46			07:42		08:10 (1)	07:44	08:38
	22:06			21:18		20:05			18:49	12	08:22 (1)	16:39	16:02
9	05:01			05:50		06:48			07:44		08:12 (1)	07:46	08:39
	22:05			21:16		20:03			18:46	10	08:22 (1)	16:37	16:01
10	05:02			05:52		06:49			07:46		08:14 (1)	07:48	08:40
	22:04			21:14		20:00			18:44	7	08:21 (1)	16:35	16:01
11	05:03			05:54		06:51			07:48		08:16 (1)	07:50	08:41
	22:03			21:12		19:58			18:41	3	08:19 (1)	16:34	16:01
12	05:05			05:55		06:53			07:50			07:52	08:43
	22:02			21:10		19:55			18:39			16:32	16:00
13	05:06			05:57		06:55		07:35 (5)	07:52			07:54	08:44
	22:01			21:08		19:53	8	07:43 (5)	18:37			16:30	16:00
14	05:07			05:59		06:57		07:32 (5)	07:54			07:56	08:45
	22:00			21:06		19:50	12	07:44 (5)	18:34			16:28	16:00
15	05:08			06:01		06:59		07:31 (5)	07:56		08:46 (6)	07:58	08:46
	21:59			21:03		19:47	14	07:45 (5)	18:32	3	08:49 (6)	16:27	16:00
16	05:10			06:03		07:01		07:30 (5)	07:58		08:42 (6)	08:00	08:47
	21:58			21:01		19:45	16	07:46 (5)	18:29	10	08:52 (6)	16:25	16:00
17	05:11			06:05		07:02		07:30 (5)	08:00		08:40 (6)	08:02	08:47
	21:56			20:59		19:42	16	07:46 (5)	18:27	14	08:54 (6)	16:23	16:00
18	05:13			06:07		07:04		07:32 (5)	08:02		08:39 (6)	08:04	08:48
	21:55			20:57		19:40	14	07:46 (5)	18:25	16	08:55 (6)	16:22	16:00
19	05:14			06:08		07:06		07:33 (5)	08:04		08:38 (6)	08:06	08:49
	21:54			20:54		19:37	11	07:44 (5)	18:22	17	08:55 (6)	16:20	16:01
20	05:16			06:10		07:08		07:35 (5)	08:06		08:37 (6)	08:08	08:50
	21:52			20:52		19:35	8	07:43 (5)	18:20	18	08:55 (6)	16:19	16:01
21	05:17			06:12		07:10		07:37 (5)	08:08		08:37 (6)	08:10	08:50
	21:51			20:50		19:32	5	07:42 (5)	18:18	18	08:55 (6)	16:18	16:01
22	05:19			06:14		07:12		07:39 (5)	08:10		08:39 (6)	08:12	08:51
	21:49			20:47		19:30	1	07:40 (5)	18:15	17	08:56 (6)	16:16	16:02
23	05:20			06:16		07:14			08:12		08:41 (6)	08:13	08:51
	21:48			20:45		19:27			18:13	14	08:55 (6)	16:15	16:02
24	05:22			06:18		07:16			08:14		08:43 (6)	08:15	08:52
	21:46			20:42		19:24			18:11	11	08:54 (6)	16:14	16:03
25	05:24			06:20		07:17			07:16		07:45 (6)	08:17	08:52
	21:45			20:40		19:22			17:08	8	07:53 (6)	16:12	16:04
26	05:25			06:22		07:19			07:18		07:47 (6)	08:19	08:52
	21:43			20:38		19:19			17:06	5	07:52 (6)	16:11	16:04
27	05:27			06:23		07:21			07:20		07:49 (6)	08:21	08:53
	21:41			20:35		19:17			17:04	1	07:50 (6)	16:10	16:05
28	05:29			06:25		07:23			07:22			08:22	08:53
	21:40			20:33		19:14			17:02			16:09	16:06
29	05:30			06:27	07:00 (2)	07:25			07:24			08:24	08:53
	21:38			20:30	7	07:07 (2)	19:12		17:00			16:08	16:07
30	05:32			06:29	06:59 (2)	07:27			07:26			08:26	08:53
	21:36			20:28	9	07:08 (2)	19:09		16:57			16:07	16:08
31	05:34			06:31	06:59 (2)				07:28				08:53
	21:34			20:25	9	07:08 (2)			16:55				16:09
Potential sun hours	519		464			383			327		254		227
Total, worst case	72		25			117			237				
Sun reduction	0,49		0,52			0,40			0,31				
Oper. time red.	1,00		1,00			1,00			1,00				
Wind dir. red.	0,78		0,98			1,00			0,93				
Total reduction	0,39		0,51			0,40			0,29				
Total, real	28		13			47			69				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	07:33 (5) 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	07:33 (5) 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:36 (5) 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	07:41 (5) 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 20:13	05:40 21:11	04:54 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 20:15	05:38 21:13	04:53 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 20:17	06:45 21:15	04:52 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 20:19	06:42 21:17	04:52 22:03
10	08:49 16:22	08:03 17:23	06:58 18:20	07:24 (1) 20:21	06:40 21:19	04:51 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	07:23 (1) 20:23	06:37 21:20	04:51 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	07:24 (1) 20:25	06:35 21:22	04:50 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	07:25 (1) 20:27	06:33 21:24	04:50 22:07
14	08:46 16:29	07:55 17:31	06:48 18:28	07:28 (1) 20:29	06:30 21:26	04:50 22:07
15	08:45 16:31	07:53 17:33	06:46 18:30	07:32 (1) 20:29	06:28 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	06:43 18:32	07:34 (1) 20:31	06:25 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 18:54	06:39 (5) 20:54	05:04 21:47	04:51 22:11
28	08:27 16:56	07:23 18:00	06:13 18:56	06:37 (5) 20:56	05:03 21:49	04:52 22:11
29	08:26 16:58	07:21 18:02	06:11 18:58	06:35 (5) 20:58	05:02 21:50	04:52 22:10
30	08:24 17:00	07:19 18:04	06:09 19:00	06:33 (5) 21:00	05:00 21:52	04:53 22:10
31	08:22 17:02	07:17 18:06	06:07 19:02	06:31 (5) 21:02	04:59 21:53	04:53 22:10
Potential sun hours	244	270	366	422	499	517
Total, worst case		124	177	29		239
Sun reduction		0,24	0,34	0,39		0,48
Oper. time red.		1,00	1,00	1,00		1,00
Wind dir. red.		0,93	0,98	1,00		0,77
Total reduction		0,23	0,34	0,40		0,38
Total, real		29	60	12		91

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December
1	04:54	05:29 (16)	05:36	06:33	07:29	08:04 (1)
	22:10	05:37 (16)	21:32	20:23	19:07	08:15 (1)
2	04:54	05:31 (16)	05:37	06:35	07:31	08:03 (1)
	22:09	05:37 (16)	21:30	20:20	19:04	08:15 (1)
3	04:55	05:33 (16)	05:39	06:36	07:32	08:02 (1)
	22:09	05:35 (16)	21:29	20:18	19:01	08:15 (1)
4	04:56		05:41	06:38	07:34	08:02 (1)
	22:08		21:27	20:15	18:59	08:15 (1)
5	04:57		05:43	06:40	07:36	08:04 (1)
	22:08		21:25	20:13	18:56	08:15 (1)
6	04:58		05:45	06:42	07:38	08:06 (1)
	22:07		21:23	20:10	18:54	08:14 (1)
7	04:59		05:46	06:44	07:40	08:08 (1)
	22:06		21:21	20:08	18:51	08:12 (1)
8	05:00		05:48	06:46	07:42	08:14 (1)
	22:06		21:18	20:05	18:49	08:12 (1)
9	05:01		05:50	06:48	07:44	08:12 (1)
	22:05		21:16	20:03	18:46	08:12 (1)
10	05:02		05:52	06:49	07:46	08:12 (1)
	22:04		21:14	20:00	18:44	08:12 (1)
11	05:03		05:54	06:51	07:48	08:36 (6)
	22:03		21:12	19:58	18:41	08:41 (6)
12	05:05		05:55	06:53	07:50	08:33 (6)
	22:02		21:10	19:55	18:39	08:44 (6)
13	05:06		05:57	06:55	07:52	08:31 (6)
	22:01		21:08	19:53	18:37	08:45 (6)
14	05:07		05:59	06:57	07:54	08:30 (6)
	22:00		21:06	19:50	18:34	08:46 (6)
15	05:09		06:01	06:59	07:56	08:29 (6)
	21:59		21:03	19:47	18:32	08:46 (6)
16	05:10		06:03	07:01	07:58	08:28 (6)
	21:58		21:01	19:45	18:29	08:47 (6)
17	05:11		06:05	07:02	08:00	08:28 (6)
	21:56		20:59	19:42	18:27	08:46 (6)
18	05:13		06:07	07:04	08:02	08:30 (6)
	21:55		20:57	19:40	18:25	08:46 (6)
19	05:14		06:08	07:06	08:04	08:32 (6)
	21:54		20:54	19:37	18:22	08:45 (6)
20	05:16		06:10	07:08	08:06	08:34 (6)
	21:52		20:52	19:35	18:20	08:44 (6)
21	05:17		06:12	07:10	08:08	08:36 (6)
	21:51		20:50	19:32	18:18	08:43 (6)
22	05:19		06:14	07:12	08:10	08:39 (6)
	21:49		20:47	19:30	18:15	08:42 (6)
23	05:20		06:16	07:14	08:12	08:41 (6)
	21:48		20:45	19:27	18:13	08:45 (6)
24	05:22		06:18	07:16	08:14	08:40 (6)
	21:46		20:42	19:24	18:11	08:44 (6)
25	05:24		06:20	07:17	08:16	08:37 (6)
	21:45		20:40	19:22	17:08	08:41 (6)
26	05:25		06:22	07:19	08:18	08:39 (6)
	21:43		20:38	19:19	17:06	08:44 (6)
27	05:27		06:23	07:21	08:20	08:36 (6)
	21:41		20:35	19:17	17:04	08:49 (6)
28	05:29		06:25	07:23	08:22	08:33 (6)
	21:40		20:33	19:14	17:02	08:44 (6)
29	05:30		06:27	07:25	08:24	08:30 (6)
	21:38		20:30	19:12	17:00	08:47 (6)
30	05:32		06:29	07:27	08:26	08:26 (6)
	21:36		20:28	19:09	16:57	08:53 (6)
31	05:34		06:31	07:29	08:28	08:23 (6)
	21:34		20:25	19:07	16:55	08:53 (6)
Potential sun hours	519	464	383	327	254	227
Total, worst case	16	35	109	221		
Sun reduction	0,49	0,52	0,40	0,31		
Oper. time red.	1,00	1,00	1,00	1,00		
Wind dir. red.	0,77	0,97	1,00	0,95		
Total reduction	0,38	0,51	0,40	0,30		
Total, real	6	18	44	65		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
 Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	
1	08:53 16:10	08:20 17:04	07:20 18:02	08:06 (6) 08:08 (6)	07:03 20:03	05:51 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56	05:30 (16) 05:37 (16)
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	05:30 (16) 05:39 (16)
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	05:29 (16) 05:40 (16)
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 07:40 (1)	06:52 20:11	05:42 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:40 (1)	06:50 20:13	05:40 21:11	04:54 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 07:40 (1)	06:47 20:15	05:38 21:13	04:53 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 07:41 (1)	06:45 20:17	05:36 21:15	04:52 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:27 (1) 07:40 (1)	06:42 20:19	05:34 21:17	04:52 22:03
10	08:49 16:22	08:03 17:23	06:58 18:20	07:28 (1) 07:39 (1)	06:40 20:21	05:32 21:19	04:51 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	07:28 (1) 07:38 (1)	06:37 20:23	05:30 21:20	04:51 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	07:31 (1) 07:35 (1)	06:35 20:25	05:28 21:22	04:50 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:27 (16) 05:46 (16)
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:26 (16) 05:45 (16)
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:26 (16) 05:46 (16)
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:27 (16) 05:46 (16)
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:27 (16) 05:47 (16)
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:27 (16) 05:47 (16)
19	08:40 16:38	07:44 17:42	08:10 (6) 08:15 (6)	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	08:08 (6) 08:16 (6)	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	08:05 (6) 08:16 (6)	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	08:03 (6) 08:17 (6)	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	08:00 (6) 08:16 (6)	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	07:59 (6) 08:16 (6)	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	07:59 (6) 08:15 (6)	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	08:00 (6) 08:15 (6)	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	08:01 (6) 08:14 (6)	06:15 18:54	06:39 (5) 20:54	05:04 21:47	04:51 22:11
28	08:27 16:56	07:23 18:00	08:02 (6) 08:12 (6)	06:13 18:56	06:38 (5) 20:56	05:03 21:49	04:52 22:11
29	08:26 16:58	07:21 18:02	07:10 19:58	05:55 20:58	05:55 21:50	05:02 22:10	04:52 22:10
30	08:24 17:00	07:19 18:00	07:08 20:00	07:39 (5) 07:50 (5)	05:53 21:00	05:00 21:52	04:53 22:10
31	08:22 17:02	07:17 18:00	07:05 20:01	07:40 (5) 07:47 (5)	05:51 21:53	04:59 21:53	05:49 (16) 05:31 (16)
Potential sun hours	244	270	366	422	499	517	
Total, worst case			125	165			509
Sun reduction			0,24	0,34			0,48
Oper. time red.			1,00	1,00			1,00
Wind dir. red.			0,93	0,99			0,79
Total reduction			0,23	0,34			0,39
Total, real			29	57			199

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July		August		September		October		November		December	
1	04:54	05:31 (16)	05:36		06:33	07:01 (2)	07:29		07:30	08:27		
	22:10	05:49 (16)	21:32		20:23	07:06 (2)	19:07		16:53	16:06		
2	04:54	05:31 (16)	05:37		06:35	07:03 (2)	07:31		08:08 (1)	07:32	08:29	
	22:09	05:49 (16)	21:30		20:20	07:06 (2)	19:04		08:16 (1)	16:51	16:05	
3	04:55	05:32 (16)	05:39		06:36		07:32		08:06 (1)	07:34	08:30	
	22:09	05:49 (16)	21:29		20:18		19:01	11	08:17 (1)	16:49	16:05	
4	04:56	05:33 (16)	05:41		06:38		07:34		08:05 (1)	07:36	08:32	
	22:08	05:49 (16)	21:27		20:15		18:59	13	08:18 (1)	16:47	16:04	
5	04:57	05:33 (16)	05:43		06:40		07:36		08:05 (1)	07:38	08:33	
	22:08	05:49 (16)	21:25		20:13		18:56	13	08:18 (1)	16:45	16:03	
6	04:58	05:33 (16)	05:45		06:42		07:38		08:06 (1)	07:40	08:35	
	22:07	05:48 (16)	21:23		20:10		18:54	11	08:17 (1)	16:43	16:03	
7	04:59	05:34 (16)	05:46		06:44		07:40		08:08 (1)	07:42	08:36	
	22:06	05:48 (16)	21:21		20:08		18:51	9	08:17 (1)	16:41	16:02	
8	05:00	05:35 (16)	05:48		06:46		07:42		08:10 (1)	07:44	08:38	
	22:06	05:47 (16)	21:18		20:05		18:49	6	08:16 (1)	16:39	16:02	
9	05:01	05:36 (16)	05:50		06:48		07:44		08:12 (1)	07:46	08:39	
	22:05	05:46 (16)	21:16		20:03		18:46	2	08:14 (1)	16:37	16:01	
10	05:02	05:37 (16)	05:52		06:49		07:46			07:48	08:40	
	22:04	05:45 (16)	21:14		20:00		18:44			16:35	16:01	
11	05:03	05:40 (16)	05:54		06:51		07:48			07:50	08:41	
	22:03	05:44 (16)	21:12		19:58		18:41			16:34	16:01	
12	05:05		05:55		06:53	07:33 (5)	07:50			07:52	08:43	
	22:02		21:10		19:55	07:39 (5)	18:39			16:32	16:00	
13	05:06		05:57		06:55	07:30 (5)	07:52		08:37 (6)	07:54	08:44	
	22:01		21:08		19:53	07:41 (5)	18:37	7	08:44 (6)	16:30	16:00	
14	05:07		05:59		06:57	07:28 (5)	07:54		08:34 (6)	07:56	08:45	
	22:00		21:06		19:50	07:41 (5)	18:34	12	08:46 (6)	16:28	16:00	
15	05:09		06:01		06:59	07:27 (5)	07:56		08:33 (6)	07:58	08:46	
	21:59		21:03		19:47	07:42 (5)	18:32	14	08:47 (6)	16:27	16:00	
16	05:10		06:03		07:01	07:28 (5)	07:58		08:31 (6)	08:00	08:47	
	21:58		21:01		19:45	07:42 (5)	18:29	17	08:48 (6)	16:25	16:00	
17	05:11		06:05		07:02	07:30 (5)	08:00		08:31 (6)	08:02	08:47	
	21:56		20:59		19:42	07:42 (5)	18:27	17	08:48 (6)	16:23	16:00	
18	05:13		06:07		07:04	07:32 (5)	08:02		08:30 (6)	08:04	08:48	
	21:55		20:57		19:40	07:42 (5)	18:25	18	08:48 (6)	16:22	16:00	
19	05:14		06:08		07:06	07:33 (5)	08:04		08:32 (6)	08:06	08:49	
	21:54		20:54		19:37	07:40 (5)	18:22	15	08:47 (6)	16:20	16:01	
20	05:16		06:10		07:08	07:35 (5)	08:06		08:34 (6)	08:08	08:50	
	21:52		20:52		19:35	07:39 (5)	18:20	13	08:47 (6)	16:19	16:01	
21	05:17		06:12		07:10		08:08		08:36 (6)	08:10	08:50	
	21:51		20:50		19:32		18:18	10	08:46 (6)	16:18	16:01	
22	05:19		06:14		07:12		08:10		08:39 (6)	08:12	08:51	
	21:49		20:47		19:30		18:15	7	08:46 (6)	16:16	16:02	
23	05:20		06:16		07:14		08:12		08:41 (6)	08:13	08:51	
	21:48		20:45		19:27		18:13	3	08:44 (6)	16:15	16:02	
24	05:22		06:18		07:16		08:14			08:15	08:52	
	21:46		20:42		19:24		18:11			16:14	16:03	
25	05:24		06:20		07:17		07:16			08:17	08:52	
	21:45		20:40		19:22		17:08			16:12	16:04	
26	05:25		06:22		07:19		07:18			08:19	08:52	
	21:43		20:38		19:19		17:06			16:11	16:04	
27	05:27		06:23		07:21		07:20			08:21	08:53	
	21:41		20:35		19:17		17:04			16:10	16:05	
28	05:29		06:25		07:23		07:22			08:22	08:53	
	21:40		20:33		19:14		17:02			16:09	16:06	
29	05:30		06:27	06:59 (2)	07:25		07:24			08:24	08:53	
	21:38		20:30	7	07:06 (2)	19:12	17:00			16:08	16:07	
30	05:32		06:29	06:58 (2)	07:27		07:26			08:26	08:53	
	21:36		20:28	9	07:07 (2)	19:09	16:57			16:07	16:08	
31	05:34		06:31	06:59 (2)			07:28				08:53	
	21:34		20:25	7	07:06 (2)		16:55				16:09	
Potential sun hours	519		464		383		327		254		227	
Total, worst case	148		23		100		206					
Sun reduction	0,49		0,52		0,40		0,31					
Oper. time red.	1,00		1,00		1,00		1,00					
Wind dir. red.	0,79		0,98		1,00		0,95					
Total reduction	0,39		0,51		0,40		0,30					
Total, real	58		12		40		61					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53	08:20	07:20	07:58 (6)	07:03	05:51
	16:10	17:04	18:02	11 08:09 (6)	20:03	21:54
2	08:53	08:19	07:18	08:00 (6)	07:00	05:48
	16:11	17:06	18:04	5 08:05 (6)	20:05	21:03
3	08:52	08:17	07:16	06:57	05:46	04:56
	16:13	17:08	18:06	20:07	21:05	21:57
4	08:52	08:15	07:13	06:55	05:44	04:55
	16:14	17:10	18:08	20:09	21:07	21:58
5	08:52	08:13	07:11	06:52	05:42	04:55
	16:15	17:12	18:10	20:11	21:09	21:59
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40
	16:17	17:14	18:12	3 07:36 (1)	20:13	21:11
7	08:51	08:09	07:06	07:30 (1)	06:47	05:38
	16:18	17:16	18:14	7 07:37 (1)	20:15	21:13
8	08:50	08:07	07:03	07:28 (1)	06:45	05:36
	16:19	17:18	18:16	10 07:38 (1)	20:17	21:15
9	08:50	08:05	07:01	07:25 (1)	06:42	05:34
	16:21	17:21	18:18	12 07:37 (1)	20:19	21:17
10	08:49	08:03	06:58	07:25 (1)	06:40	05:32
	16:22	17:23	18:20	12 07:37 (1)	20:21	21:19
11	08:48	08:01	06:56	07:25 (1)	06:37	05:30
	16:24	17:25	18:22	11 07:36 (1)	20:23	21:20
12	08:47	07:59	06:53	07:26 (1)	06:35	05:28
	16:26	17:27	18:24	9 07:35 (1)	20:25	21:22
13	08:46	07:57	06:51	07:29 (1)	06:33	05:26
	16:27	17:29	18:26	2 07:31 (1)	20:27	21:24
14	08:46	07:55	06:48	06:30	05:24	04:50
	16:29	17:31	18:28	20:29	21:26	22:07
15	08:45	07:53	06:46	06:28	05:23	04:49
	16:31	17:33	18:30	20:31	21:28	22:08
16	08:44	07:50	06:43	06:25	05:21	04:49
	16:33	17:35	18:32	20:33	21:29	22:09
17	08:42	07:48	06:41	06:23	05:19	04:49
	16:34	17:37	18:34	20:34	21:31	22:09
18	08:41	07:46	06:38	06:20	05:17	04:49
	16:36	17:39	18:36	20:36	21:33	22:10
19	08:40	07:44	06:36	06:18	05:16	04:49
	16:38	17:42	18:38	20:38	21:35	22:10
20	08:39	07:41	08:08 (6)	06:33	06:16	05:14
	16:40	17:44	2 08:10 (6)	18:40	20:40	21:36
21	08:38	07:39	08:05 (6)	06:31	06:13	05:13
	16:42	17:46	6 08:11 (6)	18:42	20:42	21:38
22	08:36	07:37	08:03 (6)	06:28	06:11	05:11
	16:44	17:48	9 08:12 (6)	18:44	20:44	21:40
23	08:35	07:35	08:00 (6)	06:25	06:09	05:10
	16:46	17:50	12 08:12 (6)	18:46	20:46	21:41
24	08:33	07:32	07:58 (6)	06:23	06:47 (5)	06:06
	16:48	17:52	15 08:13 (6)	18:48	4 06:51 (5)	20:48
25	08:32	07:30	07:55 (6)	06:20	06:44 (5)	06:04
	16:50	17:54	17 08:12 (6)	18:50	7 06:51 (5)	20:50
26	08:30	07:28	07:55 (6)	06:18	06:42 (5)	06:02
	16:52	17:56	17 08:12 (6)	18:52	10 06:52 (5)	20:52
27	08:29	07:25	07:56 (6)	06:15	06:39 (5)	05:59
	16:54	17:58	16 08:12 (6)	18:54	12 06:51 (5)	20:54
28	08:27	07:23	07:56 (6)	06:13	06:37 (5)	05:57
	16:56	18:00	14 08:10 (6)	18:56	14 06:51 (5)	20:56
29	08:26		07:10	07:36 (5)	05:55	05:02
	16:58		19:58	14 07:50 (5)	20:58	21:50
30	08:24		07:08	07:37 (5)	05:53	05:00
	17:00		20:00	12 07:49 (5)	21:00	21:52
31	08:22		07:05	07:38 (5)		04:59
	17:02		20:01	8 07:46 (5)		21:53
Potential sun hours	244	270	366	422	499	517
Total, worst case		108	163		5	552
Sun reduction		0,24	0,34		0,52	0,48
Oper. time red.		1,00	1,00		1,00	1,00
Wind dir. red.		0,94	0,99		0,79	0,79
Total reduction		0,23	0,34		0,42	0,39
Total, real		25	56		2	216

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

		July		August		September		October		November		December	
1	04:54	19	05:31 (16)	05:36	06:33	5	07:01 (2)	07:29	7	08:06 (1)	07:30	08:27	
	22:10		05:50 (16)	21:32	20:23		07:06 (2)	19:07		08:13 (1)	16:53	16:06	
2	04:54	19	05:32 (16)	05:37	06:35	2	07:03 (2)	07:31	10	08:04 (1)	07:32	08:29	
	22:09		05:51 (16)	21:30	20:20		07:05 (2)	19:04		08:14 (1)	16:51	16:05	
3	04:55	19	05:32 (16)	05:39	06:36			07:32	12	08:03 (1)	07:34	08:30	
	22:09		05:51 (16)	21:29	20:18			19:01		08:15 (1)	16:49	16:05	
4	04:56	18	05:33 (16)	05:41	06:38			07:34		08:02 (1)	07:36	08:32	
	22:08		05:51 (16)	21:27	20:15			18:59	13	08:15 (1)	16:47	16:04	
5	04:57	17	05:34 (16)	05:43	06:40			07:36	11	08:04 (1)	07:38	08:34	
	22:08		05:51 (16)	21:25	20:13			18:56		08:15 (1)	16:45	16:03	
6	04:58	17	05:33 (16)	05:45	06:42			07:38	8	08:06 (1)	07:40	08:35	
	22:07		05:50 (16)	21:23	20:10			18:54		08:14 (1)	16:43	16:03	
7	04:59	16	05:34 (16)	05:46	06:44			07:40	5	08:08 (1)	07:42	08:36	
	22:06		05:50 (16)	21:21	20:08			18:51		08:13 (1)	16:41	16:02	
8	05:00	14	05:35 (16)	05:48	06:46			07:42	1	08:10 (1)	07:44	08:38	
	22:06		05:49 (16)	21:18	20:05			18:49		08:11 (1)	16:39	16:02	
9	05:01	14	05:35 (16)	05:50	06:48			07:44			07:46	08:39	
	22:05		05:49 (16)	21:16	20:03			18:46			16:37	16:01	
10	05:02	12	05:36 (16)	05:52	06:49			07:46			07:48	08:40	
	22:04		05:48 (16)	21:14	20:00			18:44			16:35	16:01	
11	05:03	10	05:38 (16)	05:54	06:51			07:48			07:50	08:41	
	22:03		05:48 (16)	21:12	19:58			18:41			16:34	16:01	
12	05:05	7	05:40 (16)	05:55	06:53	8	07:30 (5)	07:50	8	08:33 (6)	07:52	08:43	
	22:02		05:47 (16)	21:10	19:55		07:38 (5)	18:39		08:41 (6)	16:32	16:00	
13	05:06			05:57	06:55	12	07:28 (5)	07:52	13	08:30 (6)	07:54	08:44	
	22:01			21:08	19:53		07:40 (5)	18:37		08:43 (6)	16:30	16:00	
14	05:07			05:59	06:57	14	07:26 (5)	07:54	15	08:29 (6)	07:56	08:45	
	22:00			21:06	19:50		07:40 (5)	18:34		08:44 (6)	16:28	16:00	
15	05:09			06:01	06:59	14	07:26 (5)	07:56	16	08:28 (6)	07:58	08:46	
	21:59			21:03	19:47		07:40 (5)	18:32		08:44 (6)	16:27	16:00	
16	05:10			06:03	07:01	12	07:28 (5)	07:58	17	08:27 (6)	08:00	08:47	
	21:58			21:01	19:45		07:40 (5)	18:29		08:44 (6)	16:25	16:00	
17	05:11			06:05	07:02	10	07:30 (5)	08:00	16	08:28 (6)	08:02	08:47	
	21:56			20:59	19:42		07:40 (5)	18:27		08:44 (6)	16:23	16:00	
18	05:13			06:07	07:04	7	07:32 (5)	08:02	14	08:30 (6)	08:04	08:48	
	21:55			20:57	19:40		07:39 (5)	18:25		08:44 (6)	16:22	16:00	
19	05:14			06:08	07:06	4	07:33 (5)	08:04	11	08:32 (6)	08:06	08:49	
	21:54			20:54	19:37		07:37 (5)	18:22		08:43 (6)	16:20	16:01	
20	05:16			06:10	07:08	1	07:35 (5)	08:06	8	08:34 (6)	08:08	08:50	
	21:52			20:52	19:35		07:36 (5)	18:20		08:42 (6)	16:19	16:01	
21	05:17			06:12	07:10			08:08	5	08:36 (6)	08:10	08:50	
	21:51			20:50	19:32			18:18		08:41 (6)	16:18	16:01	
22	05:19			06:14	07:12			08:10	1	08:39 (6)	08:12	08:51	
	21:49			20:47	19:30			18:15		08:40 (6)	16:16	16:02	
23	05:20			06:16	07:14			08:12			08:13	08:51	
	21:48			20:45	19:27			18:13			16:15	16:02	
24	05:22			06:18	07:16			08:14			08:15	08:52	
	21:46			20:42	19:24			18:11			16:14	16:03	
25	05:24			06:20	07:17			07:16			08:17	08:52	
	21:45			20:40	19:22			17:08			16:12	16:04	
26	05:25			06:22	07:19			07:18			08:19	08:52	
	21:43			20:38	19:19			17:06			16:11	16:04	
27	05:27			06:23	07:21			07:20			08:21	08:53	
	21:41			20:35	19:17			17:04			16:10	16:05	
28	05:29			06:25	07:23			07:22			08:22	08:53	
	21:40			20:33	19:14			17:02			16:09	16:06	
29	05:30			06:27	06:58 (2)	7	07:25	07:24			08:24	08:53	
	21:38			20:30	07:05 (2)		19:12	17:00			16:08	16:07	
30	05:32			06:29	06:58 (2)	8	07:27	07:26			08:26	08:53	
	21:36			20:28	07:06 (2)		19:09	16:57			16:07	16:08	
31	05:34			06:31	06:59 (2)			07:28				08:53	
	21:34			20:25	07:06 (2)			16:55				16:09	
Potential sun hours	519			464			383			327	254	227	
Total, worst case	182			22			89			191			
Sun reduction	0,49			0,52			0,40			0,31			
Oper. time red.	1,00			1,00			1,00			1,00			
Wind dir. red.	0,79			0,98			1,00			0,95			
Total reduction	0,39			0,51			0,40			0,30			
Total, real	72			11			36			57			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:46 (6) 07:51 (6)	07:03 20:03	07:29 (5) 21:02
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (6) 07:51 (6)	07:00 20:05	07:29 (5) 21:03
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (6) 07:51 (6)	06:57 20:07	05:46 21:05
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (6) 07:51 (6)	06:55 20:09	05:44 21:07
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 07:51 (6)	06:52 20:11	05:42 21:09
6	08:51 16:17	08:11 17:14	07:08 18:12	07:37 (6) 07:49 (6)	06:50 20:13	05:40 21:11
7	08:51 16:18	08:09 17:16	07:06 18:14	07:38 (6) 07:48 (6)	06:47 20:15	05:38 21:13
8	08:50 16:19	08:07 17:18	07:03 18:16	07:41 (6) 07:44 (6)	06:45 20:17	05:36 21:15
9	08:50 16:21	08:05 17:21	07:01 18:18		06:42 20:19	05:34 21:17
10	08:49 16:23	08:03 17:23	06:58 18:20		06:40 20:21	05:32 21:19
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (1) 07:21 (1)	06:37 20:23	05:30 21:20
12	08:47 16:26	07:59 17:27	06:53 18:24	07:18 (1) 07:22 (1)	06:35 20:25	05:28 21:22
13	08:46 16:27	07:57 17:29	06:51 18:26	07:15 (1) 07:22 (1)	06:33 20:27	05:26 21:24
14	08:46 16:29	07:55 17:31	06:48 18:28	07:13 (1) 07:22 (1)	06:30 20:29	05:24 21:26
15	08:45 16:31	07:53 17:33	06:46 18:30	07:11 (1) 07:21 (1)	06:28 20:31	05:23 21:28
16	08:44 16:33	07:50 17:35	06:43 18:32	07:12 (1) 07:20 (1)	06:25 20:33	05:21 21:29
17	08:42 16:34	07:48 17:37	06:41 18:34	07:15 (1) 07:16 (1)	06:23 20:34	05:19 21:31
18	08:41 16:36	07:46 17:39	06:38 18:36		06:20 20:36	05:17 21:33
19	08:40 16:38	07:44 17:42	06:36 18:38		06:18 20:38	05:16 21:35
20	08:39 16:40	07:41 17:44	06:33 18:40		06:16 20:40	05:14 21:36
21	08:38 16:42	07:39 17:46	06:31 18:42		06:13 20:42	05:13 21:38
22	08:36 16:44	07:37 17:48	06:28 18:44		06:11 20:44	05:11 21:40
23	08:35 16:46	07:35 17:50	06:25 18:46		06:09 20:46	05:10 21:41
24	08:33 16:48	07:32 17:52	06:23 18:48		06:06 20:48	05:08 21:43
25	08:32 16:50	07:30 17:54	06:20 18:50		06:04 20:50	05:07 21:44
26	08:30 16:52	07:28 17:56	06:18 18:52		06:02 20:52	05:05 21:46
27	08:29 16:54	07:25 17:58	06:15 18:54	06:39 (5) 06:40 (5)	05:59 20:54	05:04 21:47
28	08:27 16:56	07:23 18:00	06:13 18:56	06:37 (5) 06:41 (5)	05:57 20:56	05:03 21:49
29	08:26 16:58		07:10 19:58	07:34 (5) 07:41 (5)	05:55 20:58	05:02 21:50
30	08:24 17:00		07:08 20:00	07:32 (5) 07:41 (5)	05:53 21:00	05:00 21:52
31	08:22 17:02		07:05 20:01	07:29 (5) 07:40 (5)		04:59 21:53
Potential sun hours	244	270	366	422	499	517
Total, worst case		2	148	17		
Sun reduction		0,24	0,34	0,39		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		0,96	0,98	1,00		
Total reduction		0,24	0,33	0,39		
Total, real		0	49	7		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: F - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54 22:10	05:36 21:32	06:33 20:23	07:01 (2) 07:02 (2)	07:29 19:07	07:30 16:53	08:27 16:06	
2	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:58 (1) 08:01 (1)	07:32 16:51	08:29 16:05	
3	04:55 22:09	05:39 21:29	06:36 20:18	07:33 19:01	07:33 16:49	07:34 16:49	08:31 16:05	
4	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:34 16:47	07:36 16:47	08:32 16:04	
5	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	07:36 16:45	07:38 16:45	08:34 16:03	
6	04:58 22:07	05:45 21:23	06:42 20:10	07:38 18:54	08:15 (6) 08:23 (6)	07:40 16:43	08:35 16:03	
7	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	08:13 (6) 08:25 (6)	07:42 16:41	08:36 16:02	
8	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	08:12 (6) 08:25 (6)	07:44 16:39	08:38 16:02	
9	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	08:12 (6) 08:26 (6)	07:46 16:37	08:39 16:01	
10	05:02 22:04	05:52 21:14	06:49 20:00	07:46 07:23 (5) 07:29 (5)	08:14 (6) 18:44	07:48 16:35	08:40 16:01	
11	05:03 22:03	05:54 21:12	06:51 19:58	07:48 07:31 (5)	07:48 18:42	08:16 (6) 08:25 (6)	07:50 16:34	08:41 16:01
12	05:05 22:02	05:56 21:10	06:53 19:55	07:50 07:21 (5) 07:32 (5)	07:50 18:39	08:18 (6) 08:25 (6)	07:52 16:32	08:43 16:00
13	05:06 22:01	05:57 21:08	06:55 19:53	07:52 07:23 (5) 07:32 (5)	07:52 18:37	08:20 (6) 08:24 (6)	07:54 16:30	08:44 16:00
14	05:07 22:00	05:59 21:06	06:57 19:50	07:54 07:31 (5) 07:26 (5)	07:54 18:34	07:56 16:28	08:45 16:00	
15	05:09 21:59	06:01 21:03	06:59 19:47	07:56 07:31 (5) 07:28 (5)	07:56 18:32	07:58 16:27	08:46 16:00	
16	05:10 21:58	06:03 21:01	07:01 19:45	07:58 07:30 (5)	07:58 18:29	08:00 16:25	08:47 16:00	
17	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:00 16:23	08:02 16:23	08:47 16:00	
18	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:02 16:22	08:04 16:22	08:48 16:00	
19	05:14 21:54	06:09 20:54	07:06 19:37	08:04 18:22	08:04 16:20	08:06 16:20	08:49 16:01	
20	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:06 16:19	08:08 16:19	08:50 16:01	
21	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18	08:10 16:18	08:51 16:01	
22	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16	08:12 16:16	08:51 16:02	
23	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:13 16:15	08:51 16:02	
24	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:14 16:14	08:15 16:14	08:52 16:03	
25	05:24 21:45	06:20 20:40	07:17 19:22	08:16 17:08	08:16 16:12	08:17 16:12	08:52 16:04	
26	05:25 21:43	06:22 20:38	07:19 19:19	08:18 17:06	08:19 16:11	08:19 16:11	08:52 16:04	
27	05:27 21:41	06:23 20:35	07:21 19:17	07:54 (1) 08:00 (1)	07:20 17:04	08:21 16:10	08:53 16:05	
28	05:29 21:40	06:25 20:33	07:23 19:14	07:52 (1) 08:02 (1)	07:22 17:02	08:22 16:09	08:53 16:06	
29	05:30 21:38	06:27 20:30	06:56 (2) 07:02 (2)	07:25 19:12	07:52 (1) 08:02 (1)	07:24 17:00	08:24 16:08	
30	05:32 21:36	06:29 20:28	06:58 (2) 07:03 (2)	07:27 19:09	07:54 (1) 08:02 (1)	07:26 16:07	08:53 16:08	
31	05:34 21:34	06:31 20:25	06:59 (2) 07:02 (2)	07:28 19:07	07:28 16:55	08:53 16:09	16:08 16:09	
Potential sun hours	519	464	383	327	254	227		
Total, worst case		14	85	88				
Sun reduction		0,52	0,40	0,31				
Oper. time red.		1,00	1,00	1,00				
Wind dir. red.		0,98	0,99	0,97				
Total reduction		0,50	0,39	0,30				
Total, real		7	33	26				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: G - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (7)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for time slots (08:53 to 17:02). Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: H - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to June) and rows for days (1 to 31). Each row contains time intervals and counts for various categories. Summary rows at the bottom show 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December
1	04:53	20:44 (15) 05:35	20:12 (18) 06:33	18:48 (2) 07:29	07:30	15:56 (1) 08:27
	22:10	30 21:14 (14) 21:32	19 20:31 (18) 20:23	22 19:10 (2) 19:06	16:53	15 16:11 (6) 16:06
2	04:54	20:44 (15) 05:37	20:12 (18) 06:34	18:46 (2) 07:30	07:32	15:55 (1) 08:29
	22:09	31 21:15 (14) 21:30	20 20:32 (18) 20:20	25 19:11 (2) 19:04	16:51	17 16:12 (6) 16:05
3	04:55	20:45 (15) 05:39	20:11 (18) 06:36	18:44 (2) 07:32	07:34	15:56 (1) 08:30
	22:09	30 21:15 (14) 21:28	22 20:33 (18) 20:18	27 19:11 (2) 19:01	16:49	18 16:14 (6) 16:04
4	04:56	20:44 (15) 05:41	20:10 (18) 06:38	18:43 (2) 07:34	07:36	15:56 (1) 08:32
	22:08	31 21:15 (14) 21:26	23 20:33 (18) 20:15	29 19:12 (2) 18:59	16:47	18 16:14 (6) 16:04
5	04:57	20:45 (15) 05:43	20:10 (18) 06:40	18:43 (2) 07:36	07:38	15:56 (1) 08:33
	22:08	30 21:15 (14) 21:24	24 20:34 (18) 20:13	29 19:12 (2) 18:56	16:45	16 16:12 (6) 16:03
6	04:58	20:45 (15) 05:44	20:09 (18) 06:42	18:42 (2) 07:38	17:55 (5) 07:40	15:56 (1) 08:35
	22:07	31 21:16 (14) 21:22	25 20:34 (18) 20:10	30 19:12 (2) 18:54	5 18:00 (5) 16:43	13 16:09 (6) 16:02
7	04:59	20:45 (15) 05:46	20:08 (18) 06:44	18:42 (2) 07:40	17:52 (5) 07:42	15:58 (1) 08:36
	22:06	31 21:16 (14) 21:20	26 20:34 (18) 20:08	30 19:12 (2) 18:51	11 18:03 (5) 16:41	10 16:08 (6) 16:02
8	05:00	20:46 (15) 05:48	20:08 (18) 06:46	18:41 (2) 07:42	17:49 (5) 07:44	15:58 (1) 08:38
	22:06	30 21:16 (14) 21:18	26 20:34 (18) 20:05	30 19:11 (2) 18:49	15 18:04 (5) 16:39	8 16:06 (6) 16:01
9	05:01	20:46 (15) 05:50	20:09 (18) 06:47	18:41 (2) 07:44	17:47 (5) 07:46	16:00 (1) 08:39
	22:05	30 21:16 (14) 21:16	25 20:34 (18) 20:03	30 19:11 (2) 18:46	17 18:04 (5) 16:37	3 16:03 (6) 16:01
10	05:02	20:46 (15) 05:52	20:08 (18) 06:49	18:41 (2) 07:46	17:47 (5) 07:48	08:40
	22:04	30 21:16 (14) 21:14	25 20:33 (18) 20:00	29 19:10 (2) 18:44	19 18:06 (5) 16:35	16:01
11	05:03	20:46 (15) 05:54	20:08 (18) 06:51	18:41 (2) 07:48	17:46 (5) 07:50	08:41
	22:03	30 21:16 (14) 21:12	25 20:33 (18) 19:58	29 19:10 (2) 18:41	20 18:06 (5) 16:33	16:00
12	05:04	20:48 (15) 05:55	20:09 (18) 06:53	18:41 (2) 07:50	17:46 (5) 07:52	08:42
	22:02	29 21:17 (14) 21:10	24 20:33 (18) 19:55	28 19:09 (2) 18:39	20 18:06 (5) 16:32	16:00
13	05:06	20:48 (15) 05:57	20:09 (18) 06:55	18:41 (2) 07:52	17:45 (5) 07:54	08:44
	22:01	29 21:17 (14) 21:08	24 20:33 (18) 19:52	26 19:07 (2) 18:36	21 18:06 (5) 16:30	16:00
14	05:07	20:48 (15) 05:59	20:09 (18) 06:57	18:42 (2) 07:54	17:45 (5) 07:56	08:45
	22:00	29 21:17 (14) 21:05	23 20:32 (17) 19:50	23 19:05 (2) 18:34	19 18:04 (5) 16:28	16:00
15	05:08	20:49 (15) 06:01	20:10 (18) 06:59	18:43 (2) 07:56	17:45 (5) 07:58	08:46
	21:59	28 21:17 (14) 21:03	22 20:32 (17) 19:47	21 19:04 (2) 18:32	16 18:01 (5) 16:27	16:00
16	05:10	20:50 (15) 06:03	20:11 (18) 07:00	18:45 (2) 07:57	17:46 (5) 08:00	08:47
	21:57	27 21:17 (14) 21:01	20 20:31 (17) 19:45	17 19:02 (2) 18:29	13 17:59 (5) 16:25	16:00
17	05:11	20:50 (15) 06:05	20:11 (18) 07:02	18:48 (2) 07:59	17:46 (5) 08:02	08:47
	21:56	27 21:17 (14) 20:59	17 20:28 (17) 19:42	10 18:58 (2) 18:27	10 17:56 (5) 16:23	16:00
18	05:13	20:51 (15) 06:06	20:13 (17) 07:04	08:01	17:48 (5) 08:04	08:48
	21:55	25 21:16 (14) 20:56	13 20:26 (17) 19:40	18:24	6 17:54 (5) 16:22	16:00
19	05:14	20:52 (15) 06:08	20:15 (17) 07:06	08:03	17:50 (5) 08:06	08:49
	21:54	24 21:16 (14) 20:54	9 20:24 (17) 19:37	18:22	1 17:51 (5) 16:20	16:01
20	05:16	20:53 (15) 06:10	20:17 (17) 07:08	08:05	08:08	08:50
	21:52	23 21:16 (14) 20:52	5 20:22 (17) 19:35	18:20	16:19	16:01
21	05:17	20:54 (15) 06:12	07:10	08:07	08:10	08:50
	21:51	21 21:15 (14) 20:49	19:32	18:17	16:17	16:01
22	05:19	20:56 (15) 06:14	07:12	08:09	08:11	08:51
	21:49	18 21:14 (14) 20:47	19:29	18:15	16:16	16:02
23	05:20	20:59 (15) 06:16	07:14	08:11	08:13	08:51
	21:48	14 21:13 (14) 20:45	19:27	18:13	16:15	16:02
24	05:22	21:02 (14) 06:18	07:15	08:13	08:15	08:52
	21:46	10 21:12 (14) 20:42	19:24	18:10	16:13	16:03
25	05:23	21:05 (14) 06:20	07:17	07:15	08:17	08:52
	21:45	3 21:08 (14) 20:40	19:22	17:08	16:12	16:03
26	05:25	06:21	07:19	07:17	08:19	08:52
	21:43	20:37	19:19	17:06	16:11	16:04
27	05:27	06:23	07:21	07:19	08:20	08:53
	21:41	20:35	19:17	17:04	16:10	16:05
28	05:28	06:25	07:23	07:21	08:22	08:53
	21:39	20:33	19:14	17:02	16:09	16:06
29	05:30	20:17 (18) 06:27	18:56 (2) 07:25	07:24	16:01 (1) 08:24	08:53
	21:38	9 20:26 (18) 20:30	9 19:05 (2) 19:11	16:59	6 16:07 (1) 16:08	16:07
30	05:32	20:15 (18) 06:29	18:52 (2) 07:27	07:26	15:58 (1) 08:26	08:53
	21:36	14 20:29 (18) 20:28	15 19:07 (2) 19:09	16:57	11 16:09 (1) 16:07	16:08
31	05:34	20:14 (18) 06:31	18:49 (2)	07:28	15:57 (1)	08:53
	21:34	17 20:31 (18) 20:25	20 19:09 (2)	16:55	13 16:10 (1)	16:09
Potential sun hours	519	464	383	327	254	227
Total, worst case	681	461	435	223	118	
Sun reduction	0,49	0,52	0,40	0,31	0,16	
Oper. time red.	1,00	1,00	1,00	1,00	1,00	
Wind dir. red.	0,88	0,96	1,00	0,91	0,81	
Total reduction	0,43	0,49	0,39	0,28	0,13	
Total, real	290	228	171	62	15	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: I - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for time slots (08:53 to 17:02). Includes summary rows for Potential sun hours, Total, worst case, Sun reduction, Oper. time red., Wind dir. red., Total reduction, and Total, real.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March		April	May	June	
1	08:53	08:20	07:20		07:03	05:51	04:58	
	16:10	17:04	18:02		20:03	21:02	21:54	
2	08:53	08:19	07:18		07:00	05:48	04:57	
	16:11	17:06	18:04		20:05	21:04	21:56	
3	08:52	08:17	07:16		06:58	05:46	04:56	
	16:13	17:08	18:06		20:07	21:05	21:57	
4	08:52	08:15	07:13		06:55	05:44	04:55	
	16:14	17:10	18:08		20:09	21:07	21:58	
5	08:52	08:13	07:11	07:36 (6)	06:52	05:42	04:55	
	16:15	17:12	18:10	1	07:37 (6)	20:11	21:09	21:59
6	08:51	08:11	07:08	07:33 (6)	06:50	05:40	04:54	
	16:17	17:14	18:12	4	07:37 (6)	20:13	21:11	22:00
7	08:51	08:09	07:06	07:31 (6)	06:47	05:38	04:53	
	16:18	17:16	18:14	7	07:38 (6)	20:15	21:13	22:01
8	08:50	08:07	07:03	07:28 (6)	06:45	05:36	04:52	
	16:19	17:18	18:16	9	07:37 (6)	20:17	21:15	22:02
9	08:50	08:05	07:01	07:25 (6)	06:42	05:34	04:52	
	16:21	17:21	18:18	11	07:36 (6)	20:19	21:17	22:03
10	08:49	08:03	06:58	07:24 (6)	06:40	05:32	04:51	
	16:23	17:23	18:20	11	07:35 (6)	20:21	21:19	22:04
11	08:48	08:01	06:56	07:25 (6)	06:37	05:30	04:51	
	16:24	17:25	18:22	8	07:33 (6)	20:23	21:20	22:05
12	08:47	07:59	06:53		06:35	05:28	04:50	05:25 (15)
	16:26	17:27	18:24		20:25	21:22	22:06	4 05:29 (15)
13	08:46	07:57	06:51		06:33	05:26	04:50	05:24 (15)
	16:27	17:29	18:26		20:27	21:24	22:07	6 05:30 (15)
14	08:46	07:55	06:48		06:30	05:24	04:50	05:24 (15)
	16:29	17:31	18:28		20:29	21:26	22:07	8 05:32 (15)
15	08:45	07:53	06:46	07:10 (1)	06:28	05:23	04:49	05:23 (15)
	16:31	17:33	18:30	2	07:12 (1)	20:31	21:28	8 05:31 (15)
16	08:44	07:50	06:43	07:08 (1)	06:25	05:21	04:49	05:23 (15)
	16:33	17:35	18:32	5	07:13 (1)	20:33	21:29	9 05:32 (15)
17	08:42	07:48	06:41	07:05 (1)	06:23	05:19	04:49	05:23 (15)
	16:34	17:37	18:34	7	07:12 (1)	20:35	21:31	10 05:33 (15)
18	08:41	07:46	06:38	07:02 (1)	06:20	05:17	04:49	05:23 (15)
	16:36	17:39	18:36	9	07:11 (1)	20:36	21:33	10 05:33 (15)
19	08:40	07:44	06:36	07:04 (1)	06:18	05:16	04:49	05:23 (15)
	16:38	17:42	18:38	5	07:09 (1)	20:38	21:35	10 05:33 (15)
20	08:39	07:42	06:33		06:16	05:14	04:49	05:23 (15)
	16:40	17:44	18:40		20:40	21:36	22:10	11 05:34 (15)
21	08:38	07:39	06:31		06:13	05:13	04:49	05:24 (15)
	16:42	17:46	18:42		20:42	21:38	22:11	11 05:35 (15)
22	08:36	07:37	06:28		06:11	05:11	04:49	05:24 (15)
	16:44	17:48	18:44		20:44	21:40	22:11	11 05:35 (15)
23	08:35	07:35	06:25		06:09	05:10	04:49	05:24 (15)
	16:46	17:50	18:46		20:46	21:41	22:11	10 05:34 (15)
24	08:33	07:32	06:23		06:06	05:08	04:50	05:25 (15)
	16:48	17:52	18:48		20:48	21:43	22:11	10 05:35 (15)
25	08:32	07:30	06:20		06:04	05:07	04:50	05:25 (15)
	16:50	17:54	18:50		20:50	21:44	22:11	10 05:35 (15)
26	08:30	07:28	06:18		06:02	05:05	04:51	05:25 (15)
	16:52	17:56	18:52		20:52	21:46	22:11	9 05:34 (15)
27	08:29	07:25	06:15		05:59	05:04	04:51	05:26 (15)
	16:54	17:58	18:54		20:54	21:47	22:11	9 05:35 (15)
28	08:27	07:23	06:13		05:57	05:03	04:52	05:26 (15)
	16:56	18:00	18:56		20:56	21:49	22:11	8 05:34 (15)
29	08:26		07:10		05:55	05:02	04:52	05:27 (15)
	16:58		19:58		20:58	21:50	22:10	7 05:34 (15)
30	08:24		07:08		05:53	05:00	04:53	05:29 (15)
	17:00		20:00		21:00	21:52	22:10	5 05:34 (15)
31	08:22		07:05			04:59		
	17:02		20:01			21:53		
Potential sun hours	244	270	366		422	499	517	
Total, worst case				79				166
Sun reduction				0,34				0,48
Oper. time red.				1,00				1,00
Wind dir. red.				0,98				0,77
Total reduction				0,34				0,38
Total, real				27				63

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: J - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Assumptions for shadow calculations

Table with 12 columns (Jan-Dec) and 1 row of values: 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time table with columns 0, 1, Sum and values 4.380 4.380 8.760

Main shadow calculation table with columns for months (July-December) and rows for each day (1-31) showing sun rise/set times and shadow reduction factors.

Table layout: For each day in each month the following matrix apply

Matrix table with 4 columns: Day in month, Sun rise/set times, Minutes with flicker, First/Last time with flicker (WTG causing flicker).



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March		April	May	June			
1	08:53	08:20	07:20		07:03	05:51	04:58			
	16:10	17:04	18:02		20:03	21:02	21:54			
2	08:53	08:19	07:18		07:00	05:48	04:57			
	16:11	17:06	18:04		20:05	21:04	21:56			
3	08:52	08:17	07:16		06:58	05:46	04:56			
	16:13	17:08	18:06		20:07	21:05	21:57			
4	08:52	08:15	07:13		06:55	05:44	04:55			
	16:14	17:10	18:08		20:09	21:07	21:58			
5	08:52	08:13	07:11		06:52	05:42	04:55			
	16:15	17:12	18:10		20:11	21:09	21:59			
6	08:51	08:11	07:08		06:50	05:40	04:54			
	16:17	17:14	18:12		20:13	21:11	22:00			
7	08:51	08:09	07:06	07:31 (6)	06:47	05:38	04:53	05:26 (15)		
	16:18	17:16	18:14	2	07:33 (6)	20:15	21:13	22:01	5	05:31 (15)
8	08:50	08:07	07:03	07:28 (6)	06:45	05:36	04:52	05:26 (15)		
	16:19	17:18	18:16	5	07:33 (6)	20:17	21:15	22:02	7	05:33 (15)
9	08:50	08:05	07:01	07:25 (6)	06:42	05:34	04:52	05:25 (15)		
	16:21	17:21	18:18	7	07:32 (6)	20:19	21:17	22:03	9	05:34 (15)
10	08:49	08:03	06:58	07:23 (6)	06:40	05:32	04:51	05:25 (15)		
	16:23	17:23	18:20	9	07:32 (6)	20:21	21:19	22:04	10	05:35 (15)
11	08:48	08:01	06:56	07:20 (6)	06:37	05:30	04:51	05:24 (15)		
	16:24	17:25	18:22	11	07:31 (6)	20:23	21:20	22:05	11	05:35 (15)
12	08:47	07:59	06:53	07:21 (6)	06:35	05:28	04:50	05:24 (15)		
	16:26	17:27	18:24	9	07:30 (6)	20:25	21:22	22:06	12	05:36 (15)
13	08:46	07:57	06:51	07:24 (6)	06:33	05:26	04:50	05:24 (15)		
	16:27	17:29	18:26	1	07:25 (6)	20:27	21:24	22:07	13	05:37 (15)
14	08:46	07:55	06:48		06:30	05:24	04:50	05:24 (15)		
	16:29	17:31	18:28		20:29	21:26	22:07	13	05:37 (15)	
15	08:45	07:53	06:46		06:28	05:23	04:49	05:23 (15)		
	16:31	17:33	18:30		20:31	21:28	22:08	14	05:37 (15)	
16	08:44	07:50	06:43	07:08 (1)	06:25	05:21	04:49	05:23 (15)		
	16:33	17:35	18:32	1	07:09 (1)	20:33	21:29	22:09	14	05:37 (15)
17	08:42	07:48	06:41	07:05 (1)	06:23	05:19	04:49	05:23 (15)		
	16:34	17:37	18:34	4	07:09 (1)	20:35	21:31	22:09	15	05:38 (15)
18	08:41	07:46	06:38	07:02 (1)	06:20	05:17	04:49	05:23 (15)		
	16:36	17:39	18:36	6	07:08 (1)	20:36	21:33	22:10	15	05:38 (15)
19	08:40	07:44	06:36	07:00 (1)	06:18	05:16	04:49	05:23 (15)		
	16:38	17:42	18:38	8	07:08 (1)	20:38	21:35	22:10	15	05:38 (15)
20	08:39	07:42	06:33	07:00 (1)	06:16	05:14	04:49	05:23 (15)		
	16:40	17:44	18:40	5	07:05 (1)	20:40	21:36	22:10	15	05:38 (15)
21	08:38	07:39	06:31		06:13	05:13	04:49	05:24 (15)		
	16:42	17:46	18:42		20:42	21:38	22:11	15	05:39 (15)	
22	08:36	07:37	06:28		06:11	05:11	04:49	05:24 (15)		
	16:44	17:48	18:44		20:44	21:40	22:11	15	05:39 (15)	
23	08:35	07:35	06:25		06:09	05:10	04:50	05:24 (15)		
	16:46	17:50	18:46		20:46	21:41	22:11	15	05:39 (15)	
24	08:33	07:32	06:23		06:06	05:08	04:50	05:25 (15)		
	16:48	17:52	18:48		20:48	21:43	22:11	15	05:40 (15)	
25	08:32	07:30	06:20		06:04	05:07	04:50	05:25 (15)		
	16:50	17:54	18:50		20:50	21:44	22:11	15	05:40 (15)	
26	08:30	07:28	06:18		06:02	05:05	04:51	05:25 (15)		
	16:52	17:56	18:52		20:52	21:46	22:11	14	05:39 (15)	
27	08:29	07:25	06:15		05:59	05:04	04:51	05:26 (15)		
	16:54	17:58	18:54		20:54	21:47	22:11	14	05:40 (15)	
28	08:27	07:23	06:13		05:57	05:03	04:52	05:26 (15)		
	16:56	18:00	18:56		20:56	21:49	22:11	13	05:39 (15)	
29	08:26		07:10		05:55	05:02	04:52	05:27 (15)		
	16:58		19:58		20:58	21:50	22:10	13	05:40 (15)	
30	08:24		07:08		05:53	05:00	04:53	05:28 (15)		
	17:00		20:00		21:00	21:52	22:10	12	05:40 (15)	
31	08:22		07:05			04:59				
	17:02		20:01			21:53				
Potential sun hours	244	270	366		422	499	517			
Total, worst case				68				309		
Sun reduction				0,34				0,48		
Oper. time red.				1,00				1,00		
Wind dir. red.				0,99				0,77		
Total reduction				0,34				0,38		
Total, real				23				118		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December
1	04:54	05:28 (15)	05:36	06:33	07:29	08:01 (6)
	22:10	05:39 (15)	21:32	20:23	19:07	08:08 (6)
2	04:54	05:29 (15)	05:37	06:35	07:31	07:59 (6)
	22:09	05:39 (15)	21:30	20:20	19:04	08:09 (6)
3	04:55	05:30 (15)	05:39	06:37	07:33	08:00 (6)
	22:09	05:39 (15)	21:29	20:18	19:01	08:10 (6)
4	04:56	05:31 (15)	05:41	06:38	07:34	08:02 (6)
	22:08	05:39 (15)	21:27	20:15	18:59	08:10 (6)
5	04:57	05:32 (15)	05:43	06:40	07:36	08:04 (6)
	22:08	05:38 (15)	21:25	20:13	18:56	08:10 (6)
6	04:58	05:32 (15)	05:45	06:42	07:38	08:06 (6)
	22:07	05:36 (15)	21:23	20:10	18:54	08:09 (6)
7	04:59	05:46	06:44	07:40	08:36	09:32
	22:06	21:21	20:08	18:51	16:41	16:02
8	05:00	05:48	06:46	07:42	08:38	09:34
	22:06	21:18	20:05	18:49	16:39	16:02
9	05:01	05:50	06:48	07:44	08:40	09:36
	22:05	21:16	20:03	18:46	16:37	16:01
10	05:02	05:52	06:50	07:46	08:42	09:38
	22:04	21:14	20:00	18:44	16:35	16:01
11	05:03	05:54	06:51	07:48	08:44	09:40
	22:03	21:12	19:58	18:42	16:34	16:01
12	05:05	05:56	06:53	07:50	08:46	09:42
	22:02	21:10	19:55	18:39	16:32	16:00
13	05:06	05:57	06:55	07:52	08:48	09:44
	22:01	21:08	19:53	18:37	16:30	16:00
14	05:07	05:59	06:57	07:54	08:50	09:46
	22:00	21:06	19:50	18:34	16:28	16:00
15	05:09	06:01	06:59	07:56	08:52	09:48
	21:59	21:03	19:48	18:32	16:27	16:00
16	05:10	06:03	07:01	07:58	08:54	09:50
	21:58	21:01	19:45	18:29	16:25	16:00
17	05:11	06:05	07:02	08:00	08:56	09:52
	21:56	20:59	19:42	18:27	16:24	16:00
18	05:13	06:07	07:04	08:02	08:58	09:54
	21:55	20:57	19:40	18:25	16:22	16:00
19	05:14	06:09	07:06	08:04	09:00	09:56
	21:54	20:54	19:37	18:22	16:20	16:01
20	05:16	06:10	07:08	08:06	09:02	09:58
	21:52	20:52	19:35	18:20	16:19	16:01
21	05:17	06:12	07:10	08:08	09:04	09:59
	21:51	20:50	19:32	18:18	16:18	16:01
22	05:19	06:14	07:12	08:10	09:06	09:59
	21:49	20:47	19:30	18:15	16:16	16:02
23	05:20	06:16	07:14	08:12	09:08	09:59
	21:48	20:45	19:27	2 07:46 (1)	18:13	16:15
24	05:22	06:18	07:16	08:14	09:10	09:59
	21:46	20:42	19:24	7 07:51 (1)	18:11	16:14
25	05:24	06:20	07:17	08:16	09:12	09:59
	21:45	20:40	19:22	7 07:52 (1)	17:08	16:12
26	05:25	06:22	07:19	08:18	09:14	09:59
	21:43	20:38	19:19	5 07:51 (1)	17:06	16:11
27	05:27	06:23	07:21	08:20	09:16	09:59
	21:41	20:35	19:17	2 07:50 (1)	17:04	16:10
28	05:29	06:25	07:23	08:22	09:18	09:59
	21:40	20:33	19:14	17:02	16:09	16:06
29	05:30	06:27	07:25	08:24	09:20	09:59
	21:38	20:30	3 06:59 (2)	19:12	17:00	16:08
30	05:32	06:29	07:27	08:26	09:22	09:59
	21:36	20:28	2 07:00 (2)	19:09	16:57	16:08
31	05:34	06:31	07:29	08:28	09:24	09:59
	21:34	20:25	1 07:00 (2)	16:55	16:09	16:09
Potential sun hours	519	464	383	327	254	227
Total, worst case	48	6	23	44		
Sun reduction	0,49	0,52	0,40	0,31		
Oper. time red.	1,00	1,00	1,00	1,00		
Wind dir. red.	0,77	0,97	1,00	0,98		
Total reduction	0,38	0,51	0,40	0,31		
Total, real	18	3	9	13		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March		April	May	June	
1	08:53 16:10	08:20 17:04	07:20 18:02		07:03 20:03	05:51 21:02	04:58 21:54	
2	08:53 16:11	08:19 17:06	07:18 18:04		07:00 20:05	05:48 21:04	04:57 21:56	
3	08:52 16:13	08:17 17:08	07:16 18:06		06:58 20:07	05:46 21:05	04:56 21:57	
4	08:52 16:14	08:15 17:10	07:13 18:08		06:55 20:09	05:44 21:07	04:55 21:58	
5	08:52 16:15	08:13 17:12	07:11 18:10		06:52 20:11	05:42 21:09	04:55 21:59	
6	08:51 16:17	08:11 17:14	07:08 18:12		06:50 20:13	05:40 21:11	04:54 22:00	
7	08:51 16:18	08:09 17:16	07:06 18:14		06:47 20:15	05:38 21:13	04:53 22:01	
8	08:50 16:19	08:07 17:18	07:03 18:16		06:45 20:17	05:36 21:15	04:52 22:02	05:30 (18)
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (6)	06:42 20:19	05:34 21:17	04:52 22:03	05:31 (18) 05:27 (18)
10	08:49 16:23	08:03 17:23	06:58 18:20	07:23 (6)	06:40 20:21	05:32 21:19	04:51 22:04	05:33 (18) 05:26 (18)
11	08:48 16:24	08:01 17:25	06:56 18:22	07:28 (6)	06:37 20:23	05:30 21:20	04:51 22:05	05:35 (18) 05:25 (18)
12	08:47 16:26	07:59 17:27	06:53 18:24	07:20 (6)	06:35 20:25	05:28 21:22	04:50 22:06	05:25 (18) 05:37 (18)
13	08:46 16:27	07:57 17:29	06:51 18:26	07:17 (6)	06:33 20:27	05:26 21:24	04:50 22:07	05:25 (18) 05:37 (18)
14	08:46 16:29	07:55 17:31	06:48 18:28	07:20 (6)	06:30 20:29	05:24 21:26	04:50 22:07	05:25 (18) 05:38 (18)
15	08:45 16:31	07:53 17:33	06:46 18:30	07:23 (6)	06:28 20:31	05:23 21:28	04:49 22:08	05:38 (18) 05:24 (18)
16	08:44 16:33	07:50 17:35	06:43 18:32		06:25 20:33	05:21 21:29	04:49 22:09	05:24 (18) 05:39 (18)
17	08:42 16:34	07:48 17:37	06:41 18:34	07:05 (1)	06:23 20:35	05:19 21:31	04:49 22:09	05:24 (18) 05:39 (18)
18	08:41 16:36	07:46 17:39	06:38 18:36	07:06 (1)	06:20 20:36	05:17 21:33	04:49 22:10	05:24 (18) 05:39 (18)
19	08:40 16:38	07:44 17:42	06:36 18:38	07:00 (1)	06:18 20:38	05:16 21:35	04:49 22:10	05:24 (18) 05:40 (18)
20	08:39 16:40	07:42 17:44	06:33 18:40	07:06 (1)	06:16 20:40	05:14 21:36	04:49 22:10	05:24 (18) 05:40 (18)
21	08:38 16:42	07:39 17:46	06:31 18:42	06:59 (1)	06:13 20:42	05:13 21:38	04:49 22:11	05:25 (18) 05:41 (18)
22	08:36 16:44	07:37 17:48	06:28 18:44	07:02 (1)	06:11 20:44	05:11 21:40	04:49 22:11	05:25 (18) 05:41 (18)
23	08:35 16:46	07:35 17:50	06:25 18:46		06:09 20:46	05:10 21:41	04:50 22:11	05:25 (18) 05:41 (18)
24	08:33 16:48	07:32 17:52	06:23 18:48		06:06 20:48	05:08 21:43	04:50 22:11	05:26 (18) 05:42 (18)
25	08:32 16:50	07:30 17:54	06:20 18:50		06:04 20:50	05:07 21:44	04:50 22:11	05:26 (18) 05:41 (18)
26	08:30 16:52	07:28 17:56	06:18 18:52		06:02 20:52	05:05 21:46	04:51 22:11	05:26 (18) 05:41 (18)
27	08:29 16:54	07:25 17:58	06:15 18:54		05:59 20:54	05:04 21:47	04:51 22:11	05:27 (18) 05:41 (18)
28	08:27 16:56	07:23 18:00	06:13 18:56		05:57 20:56	05:03 21:49	04:52 22:11	05:27 (18) 05:41 (18)
29	08:26 16:58		07:10 19:58		05:55 20:58	05:02 21:50	04:52 22:10	05:28 (18) 05:41 (18)
30	08:24 17:00		07:08 20:00		05:53 21:00	05:00 21:52	04:53 22:10	05:29 (18) 05:41 (18)
31	08:22 17:02		07:05 20:01			04:59 21:53		
Potential sun hours	244	270	366		422	499	517	
Total, worst case				57				301
Sun reduction				0,34				0,48
Oper. time red.				1,00				1,00
Wind dir. red.				0,99				0,77
Total reduction				0,34				0,38
Total, real				20				114

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December
1	04:54	05:29 (18)	05:36	06:33	07:29	07:30
	22:10	05:40 (18)	21:32	20:23	19:07	16:53
2	04:54	05:30 (18)	05:37	06:35	07:31	07:58 (6)
	22:09	05:40 (18)	21:30	20:20	19:04	16:51
3	04:55	05:31 (18)	05:39	06:37	07:33	08:00 (6)
	22:09	05:39 (18)	21:29	20:18	19:01	16:49
4	04:56	05:33 (18)	05:41	06:38	07:34	08:02 (6)
	22:08	05:38 (18)	21:27	20:15	18:59	16:47
5	04:57	05:43	06:40	07:36	08:04 (6)	07:38
	22:08	21:25	20:13	18:56	18:05 (6)	16:45
6	04:58	05:45	06:42	07:38	07:40	07:40
	22:07	21:23	20:10	18:54	16:43	16:03
7	04:59	05:46	06:44	07:40	07:42	08:36
	22:06	21:21	20:08	18:51	16:41	16:02
8	05:00	05:48	06:46	07:42	07:44	08:38
	22:06	21:18	20:05	18:49	16:39	16:02
9	05:01	05:50	06:48	07:44	07:46	08:39
	22:05	21:16	20:03	18:46	16:37	16:01
10	05:02	05:52	06:50	07:46	07:48	08:40
	22:04	21:14	20:00	18:44	16:35	16:01
11	05:03	05:54	06:51	07:48	07:50	08:41
	22:03	21:12	19:58	18:42	16:34	16:01
12	05:05	05:56	06:53	07:50	07:52	08:43
	22:02	21:10	19:55	18:39	16:32	16:00
13	05:06	05:57	06:55	07:52	07:54	08:44
	22:01	21:08	19:53	18:37	16:30	16:00
14	05:07	05:59	06:57	07:54	07:56	08:45
	22:00	21:06	19:50	18:34	16:28	16:00
15	05:09	06:01	06:59	07:56	07:58	08:46
	21:59	21:03	19:48	18:32	16:27	16:00
16	05:10	06:03	07:01	07:58	08:00	08:47
	21:58	21:01	19:45	18:29	16:25	16:00
17	05:11	06:05	07:02	08:00	08:02	08:48
	21:56	20:59	19:42	18:27	16:24	16:00
18	05:13	06:07	07:04	08:02	08:04	08:48
	21:55	20:57	19:40	18:25	16:22	16:00
19	05:14	06:09	07:06	08:04	08:06	08:49
	21:54	20:54	19:37	18:22	16:20	16:01
20	05:16	06:10	07:08	08:06	08:08	08:50
	21:52	20:52	19:35	18:20	16:19	16:01
21	05:17	06:12	07:10	08:08	08:10	08:50
	21:51	20:50	19:32	18:18	16:18	16:01
22	05:19	06:14	07:12	08:10	08:12	08:51
	21:49	20:47	19:30	18:15	16:16	16:02
23	05:20	06:16	07:14	07:42 (1)	08:12	08:13
	21:48	20:45	19:27	07:48 (1)	18:13	16:15
24	05:22	06:18	07:16	07:43 (1)	08:14	08:15
	21:46	20:42	19:24	07:49 (1)	18:11	16:14
25	05:24	06:20	07:17	07:45 (1)	07:16	08:17
	21:45	20:40	19:22	07:49 (1)	17:08	16:12
26	05:25	06:22	07:19	07:46 (1)	07:18	08:19
	21:43	20:38	19:19	2 07:48 (1)	17:06	16:11
27	05:27	06:23	07:21	07:20	08:21	08:53
	21:41	20:35	19:17	17:04	16:10	16:05
28	05:29	06:25	07:23	07:22	08:22	08:53
	21:40	20:33	19:14	17:02	16:09	16:06
29	05:30	06:27	06:56 (2)	07:25	07:24	08:54
	21:38	20:30	2 06:58 (2)	19:12	17:00	16:08
30	05:32	06:29	06:58 (2)	07:27	07:26	08:53
	21:36	20:28	2 07:00 (2)	19:09	7 08:04 (6)	16:57
31	05:34	06:31	07:29	07:28	08:53	08:53
	21:34	20:25	19:07	16:55	16:09	16:09
Potential sun hours	519	464	383	327	254	227
Total, worst case	34	4	25	29		
Sun reduction	0,49	0,52	0,40	0,31		
Oper. time red.	1,00	1,00	1,00	1,00		
Wind dir. red.	0,77	0,97	0,99	0,99		
Total reduction	0,38	0,51	0,40	0,31		
Total, real	13	2	10	9		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E66 Shut downShadow receptor: M - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and 31 rows of daily data. Each cell contains a day number and a time range (hh:mm). Summary rows at the bottom include 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

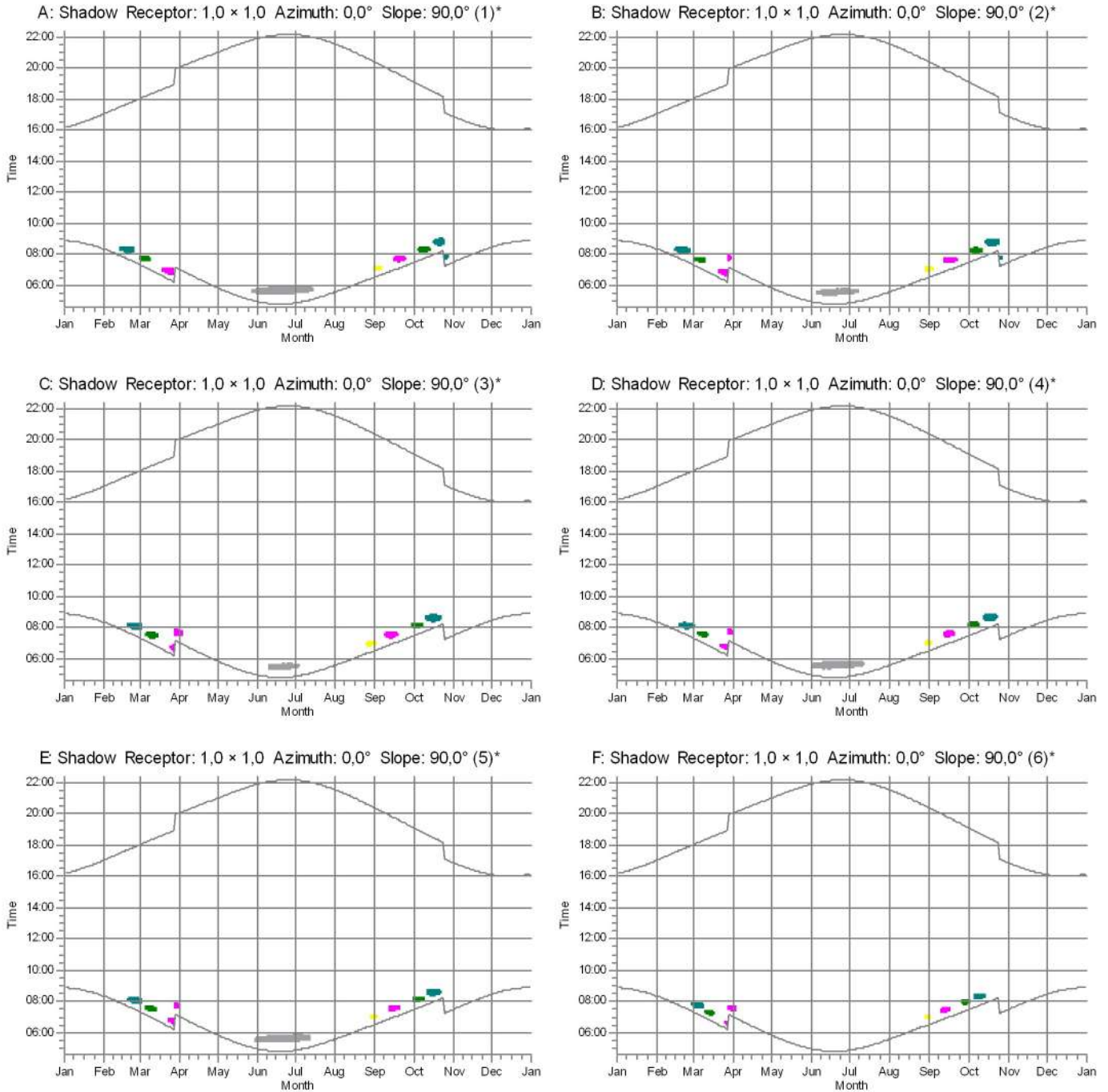
6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E66 Shut down



WTGs

- 1: ENERCON E-66/20.70 2000 70.0 I-I hub: 85,0 m (TOT: 120,0 m) (1)
- 2: ENERCON E-66/20.70 2000 70.0 I-I hub: 85,0 m (TOT: 120,0 m) (2)
- 5: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)

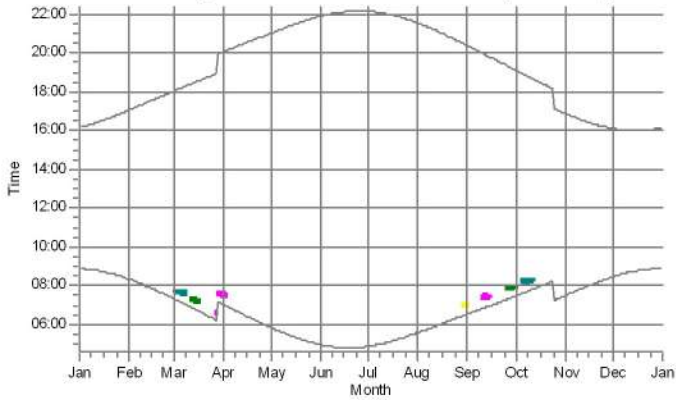
- 6: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)
- 16: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (11)

* Results reduced by flicker curtailment

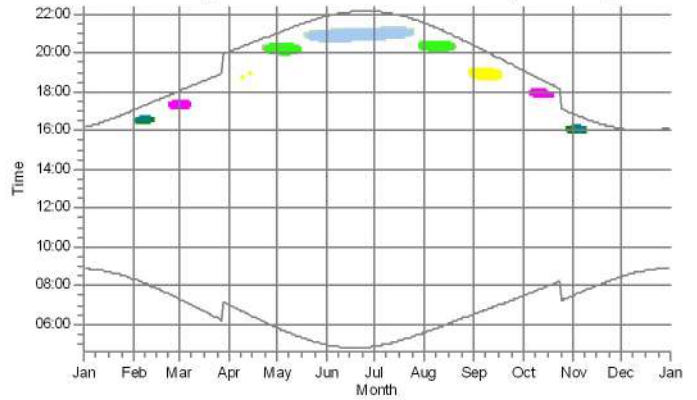
SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E66 Shut down

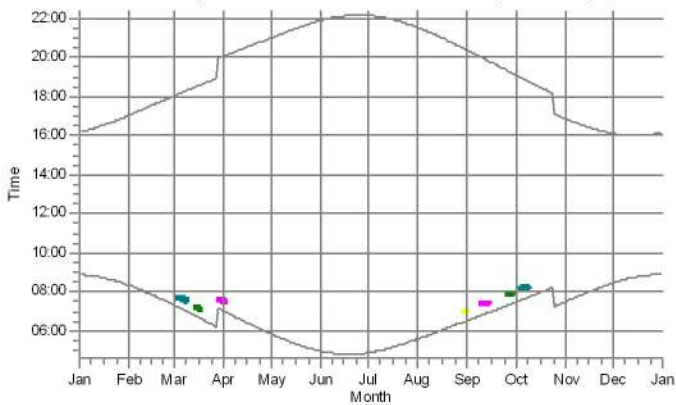
G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)*



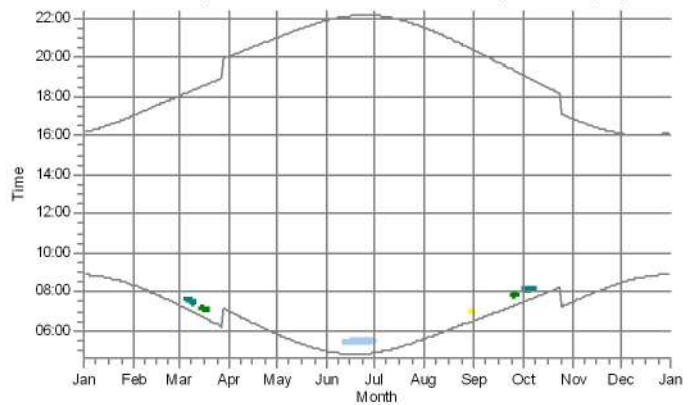
H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)*



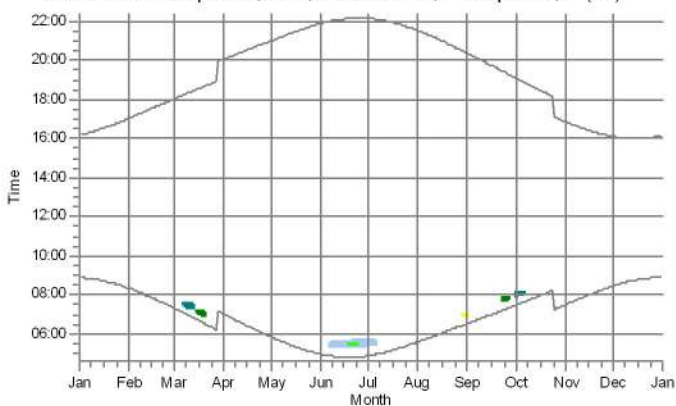
I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)*



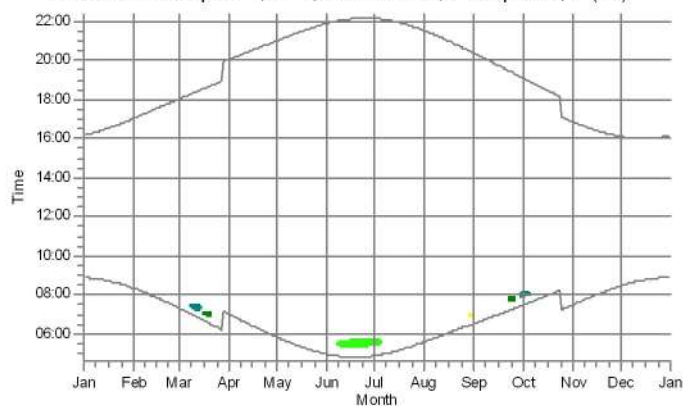
J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)*



K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)*



L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)*



WTGs

- 1: ENERCON E-66/20.70 2000 70.0 I-I hub: 85,0 m (TOT: 120,0 m) (1)
- 2: ENERCON E-66/20.70 2000 70.0 I-I hub: 85,0 m (TOT: 120,0 m) (2)
- 5: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)

- 14: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (9)
- 15: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (10)
- 17: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (12)
- 18: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (13)

* Results reduced by flicker curtailment

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas

K. Donelaicio str. 55-2

LT-44245 Kaunas

+370 37 407548

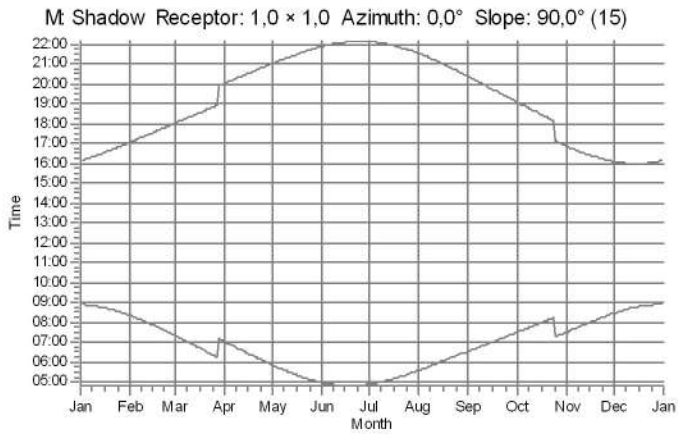
Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

2021.06.16 14:44/3.4.415

SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E66 Shut down



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 1 - ENERCON E-66/20.70 2000 70.0 I-I hub: 85,0 m (TOT: 120,0 m) (1)
Assumptions for shadow calculations

Shine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (e.g., 08:53 | 08:20) and a flicker status (0 or 1). Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 2 - ENERCON E-66/20.70 2000 70.0 I-l hub: 85,0 m (TOT: 120,0 m) (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise, Sun set, First time with flicker, Last time with flicker) and a 'Sum of minutes with flicker' at the bottom of each month column.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 3 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (7)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:22	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 4 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (8)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:30	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	17:02	16:09	16:06
29	08:25		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	16:59	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 5 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (9)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a matrix of sun rise/set times and shadow flicker data.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 6 - ENERCON E-82 2000 82.0 !OI hub: 78,3 m (TOT: 119,3 m) (10)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (e.g., 08:53 | 08:20) and a numerical value. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 7 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:07	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:42
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:47	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:00
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:11	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 8 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (3)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:11	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 9 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 10 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (5)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:14	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:16	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:04	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:17	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:01	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:19	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:00	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:21	08:24	08:53
	16:57		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:23	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 11 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (6)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
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	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:29	06:25	07:23	08:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:11	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 12 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (7)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54	04:53 22:10	05:36 21:32	06:33 20:23	07:29 19:07	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:04	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:32 19:01	07:34 16:49	08:31 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:54 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	07:38 16:45	08:34 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:44 21:23	06:42 20:10	07:38 18:54	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:19	06:46 20:05	07:42 18:49	07:44 16:39	08:38 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:22	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:46 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:41	07:50 16:34	08:41 16:00
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:55 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:43 16:00
13	08:47 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:49 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:08 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27	08:46 16:00
16	08:44 16:32	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:35	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:23	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:41	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:08 20:54	07:06 19:37	08:04 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:42 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:12 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	07:16 17:08	08:17 16:12	08:52 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:50 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:18 17:06	08:19 16:11	08:53 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:20 17:04	08:21 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:40	06:25 20:33	07:23 19:14	07:22 17:02	08:22 16:09	08:53 16:06
29	08:26 16:58		07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:11	05:30 21:38	06:27 20:30	07:25 19:12	07:24 17:00	08:24 16:08	08:53 16:07
30	08:24 17:00		07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	07:26 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02		07:05 20:01		04:59 21:53		05:34 21:34	06:31 20:25		07:28 16:55		08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 13 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:03	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:13	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:22	07:19	07:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:29	06:25	07:23	07:22	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		20:00	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 14 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (9)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 13 columns (January to December) and 31 rows (1 to 31). Each cell contains a time range (Sun rise to Sun set) and a numerical value (minutes with flicker). Includes summary rows for 'Potential sun hours' and 'Sum of minutes with flicker'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
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SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 15 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each month's column.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
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SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 16 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (11)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for individual days (1-31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each month's column.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 17 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 matrix of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each month's data.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 18 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day (1-31), showing sun rise/set times and shadow flicker minutes.

Table layout: For each day in each month the following matrix apply

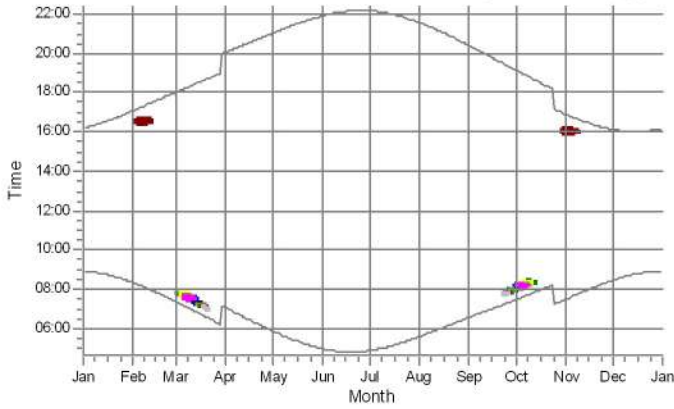
Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



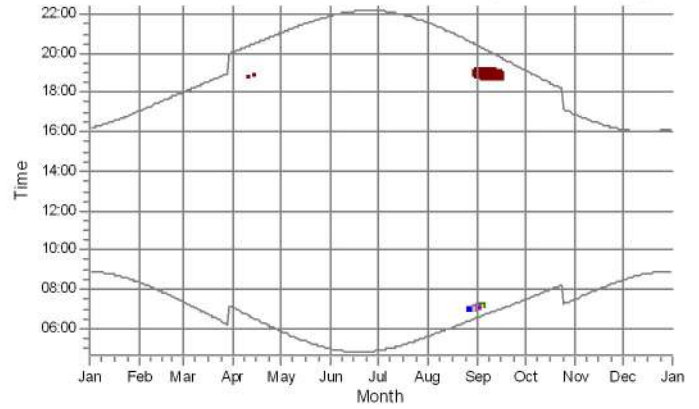
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E66 Shut down

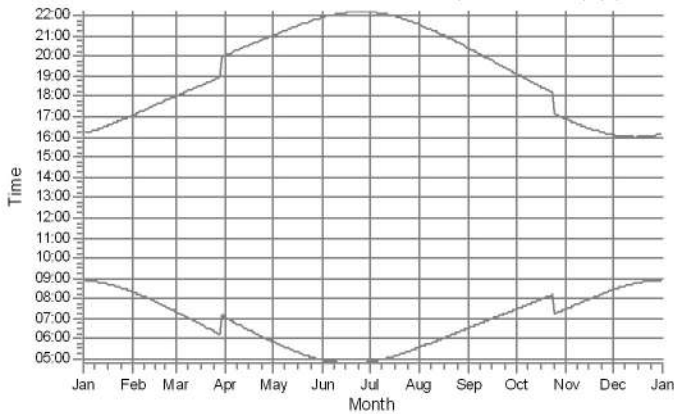
1: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)



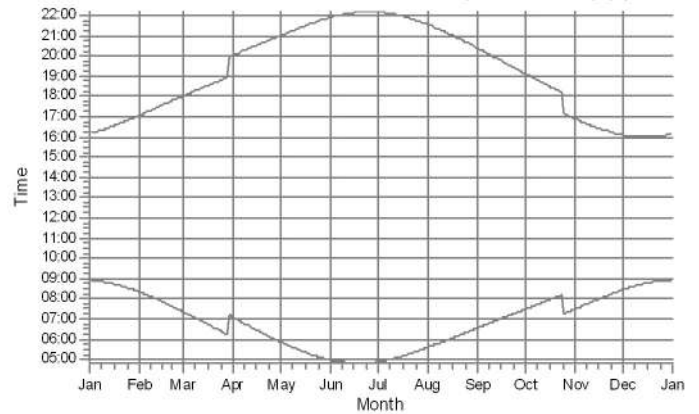
2: ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)



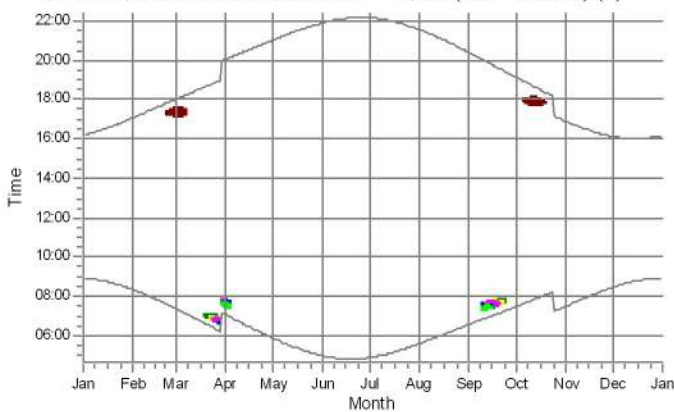
3: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)



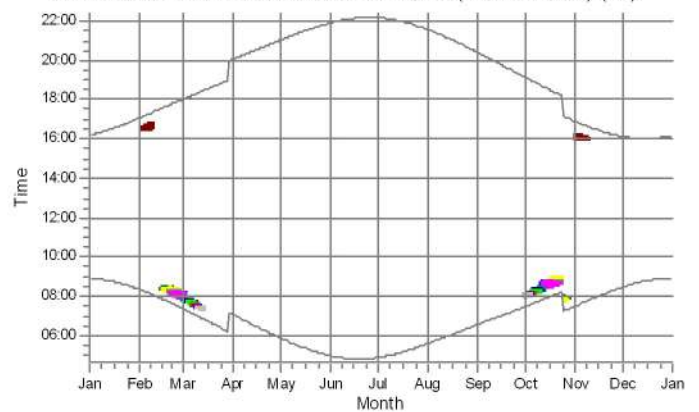
4: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)



5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)



6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)*
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)*
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)*
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)*
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)*
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)*

- G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)*
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)*
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)*
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)*
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)*
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)*

* Results reduced by flicker curtailment

Project:

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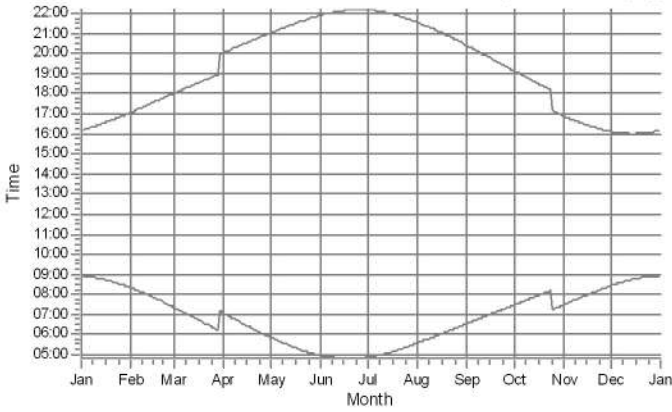
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Calculated:
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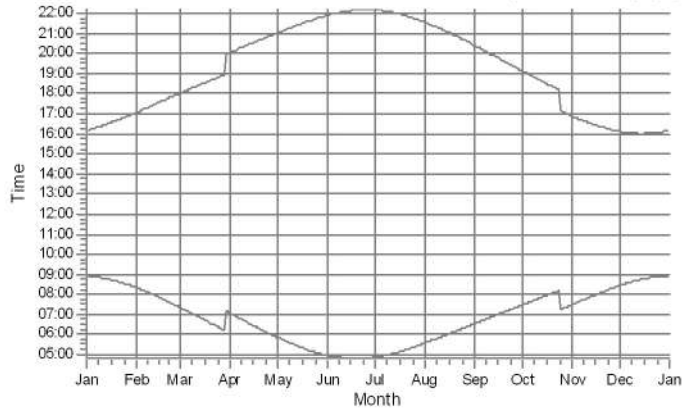
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E66 Shut down

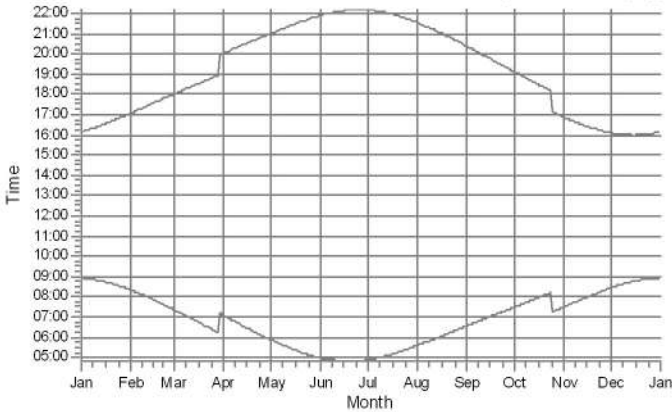
7: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)



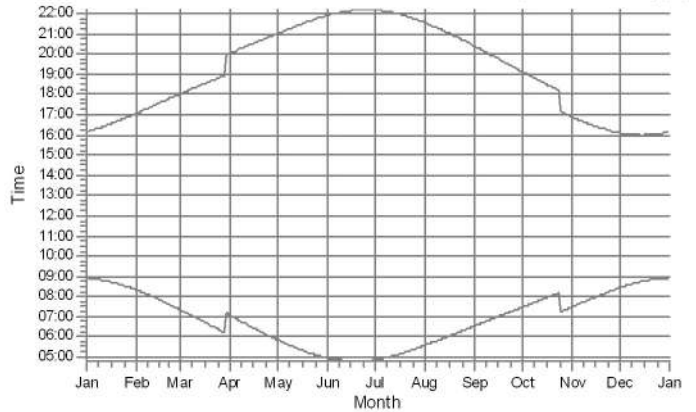
8: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)



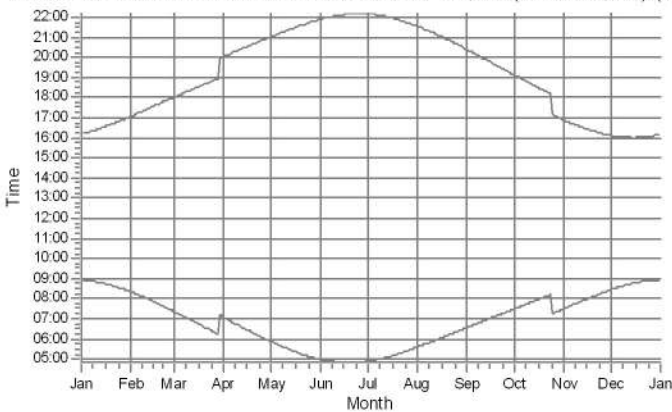
9: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)



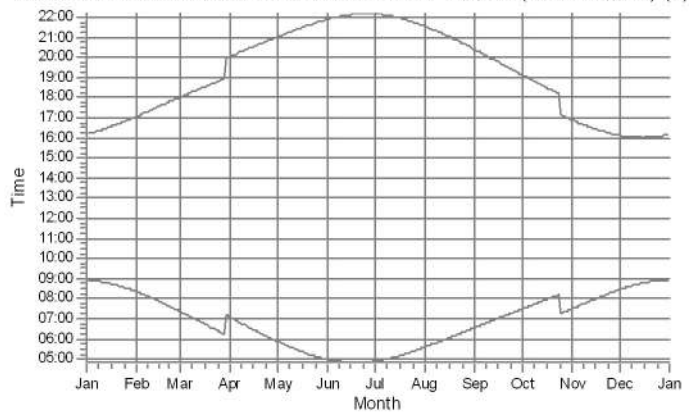
10: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)



11: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)



12: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)



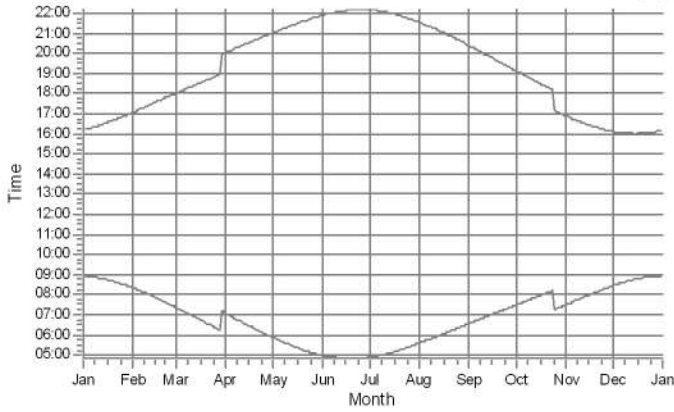
Shadow receptors

* Results reduced by flicker curtailment

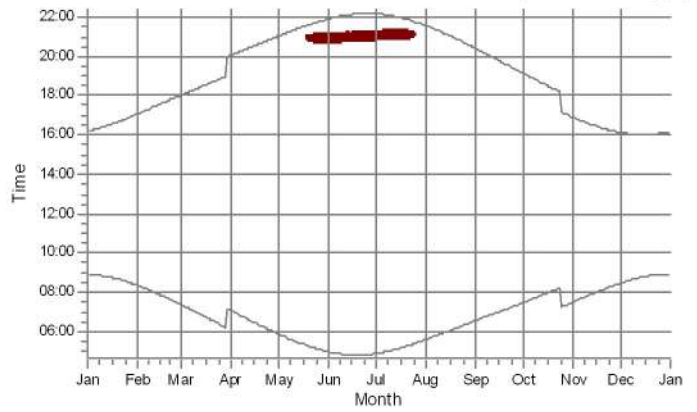
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E66 Shut down

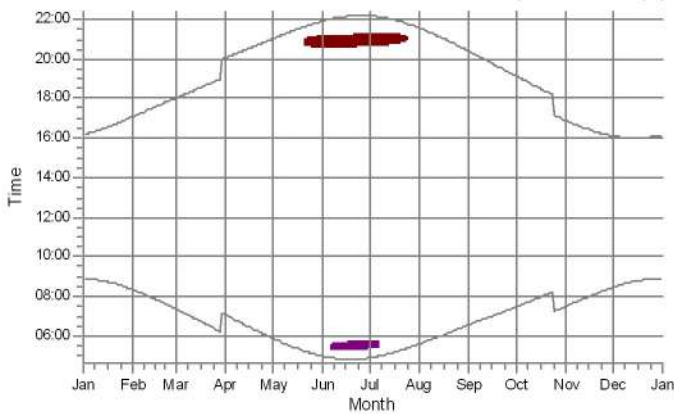
13: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (8)



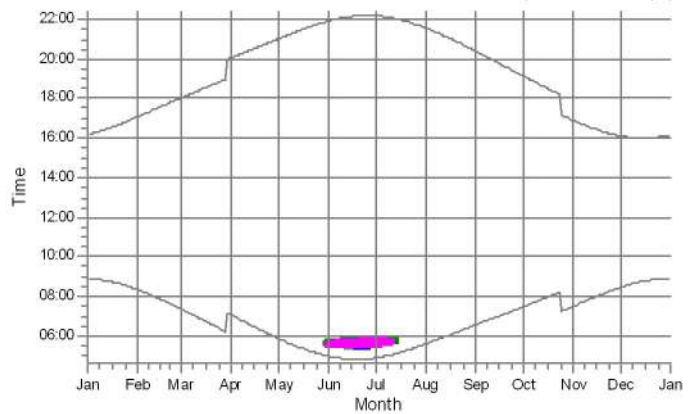
14: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (9)



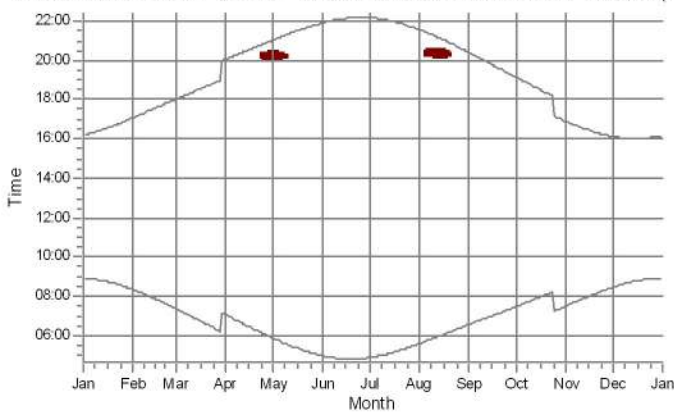
15: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (10)



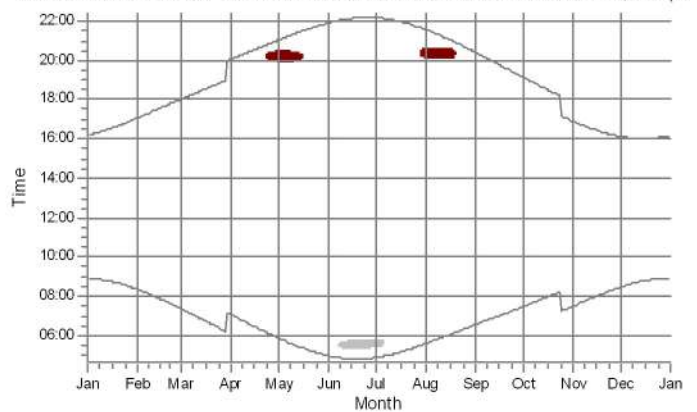
16: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (11)



17: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



18: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)*
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)*
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)*
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)*
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)*

- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)*
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)*
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)*
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)*

* Results reduced by flicker curtailment

Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 1 - ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (1)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
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25												
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27												
28												
29												
30												
31												

Project:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 2 - ENERCON E-66/20.70 2000 70.0 !-! hub: 85,0 m (TOT: 120,0 m) (2)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1				18:49-19:17								
2				18:48-19:17								
3				18:47-19:17								
4				18:46-19:17								
5				18:47-19:17								
6				18:46-19:16								
7				18:47-19:16 07:12-07:14								
8				18:46-19:14 07:09-07:14								
9				18:47-19:14 07:07-07:14								
10				18:48-19:12 07:04-07:13								
11				18:49-19:11 07:02-07:12								
12				18:50-19:09 07:00-07:09								
13				18:52-19:07 06:57-07:07								
14				18:56-19:04 06:55-07:06								
15				06:52-07:01								
16				06:52-07:00								
17				06:54-06:58								
18												
19												
20												
21												
22												
23												
24												
25												
26			18:00-18:09									
27			17:56-18:12									
28			17:54-18:14									
29			18:52-19:15									
30			18:51-19:16									
31			18:49-19:16									

Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 3 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (7)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas

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+370 37 407548

Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 4 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (8)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:

2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 5 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (9)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 6 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

Flicker curtailment according to specified plan

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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 7 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:

2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 8 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:

2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 9 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 10 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 11 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)

Flicker curtailment according to specified plan

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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:

2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 12 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:

2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 13 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)

Flicker curtailment according to specified plan

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Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 14 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)

Flicker curtailment according to specified plan

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Project:

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Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 15 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)

Flicker curtailment according to specified plan

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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 16 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (11)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 17 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:
2021.06.16 14:44/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E66 Shut downWTG: 18 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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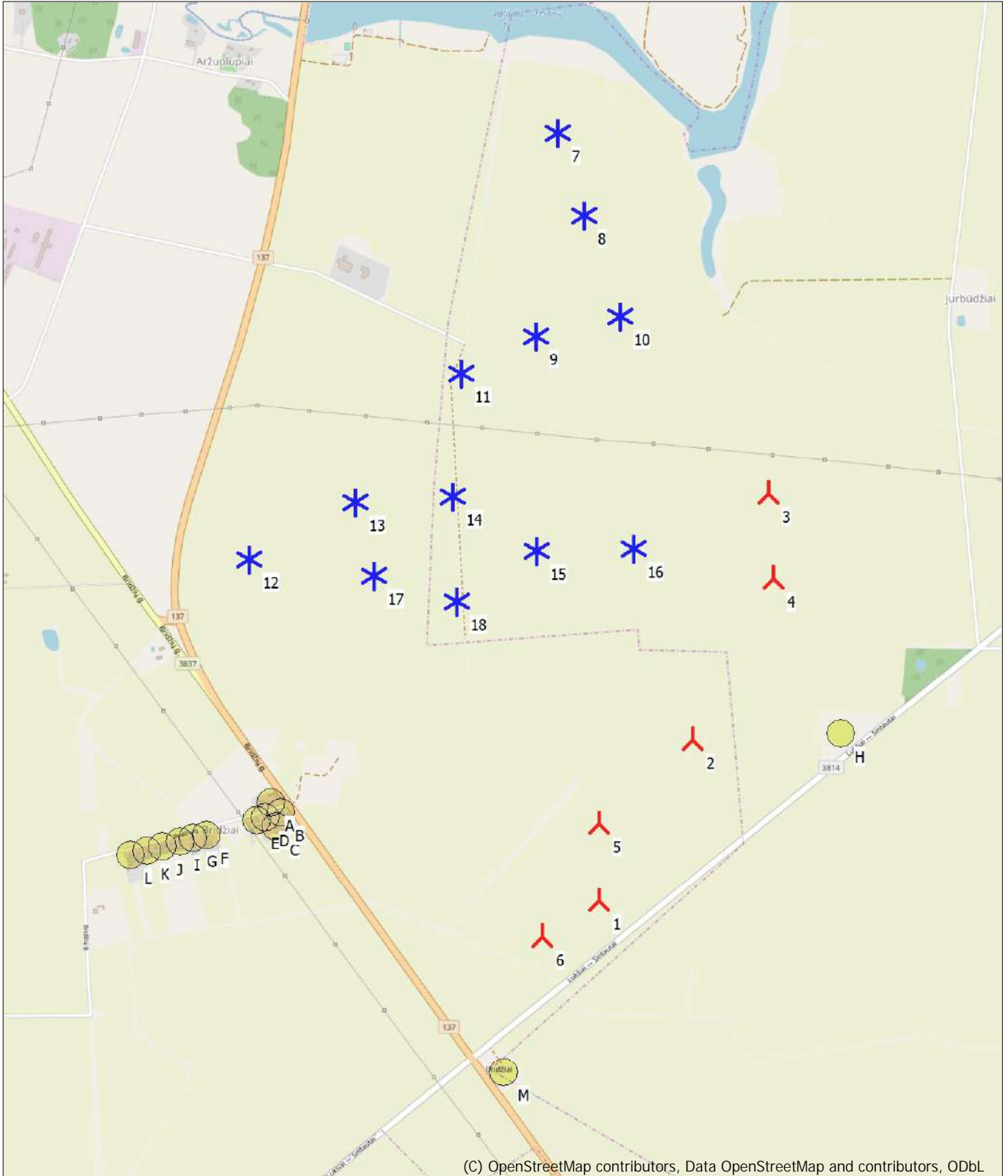
Raminta Survilø / r.survile@infraplanas.lt

Calculated:

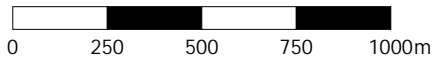
2021.06.16 14:44/3.4.415

SHADOW - Map

Calculation: Suminis poveikis Enercon E66 Shut down



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL



Map: EMD OpenStreetMap , Print scale 1:20.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 441.861 North: 6.088.422

New WTG * Existing WTG Shadow receptor

Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

Project:

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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Main Result

Calculation: Suminis poveikis Enercon E70

Assumptions for shadow calculations

Maximum distance for influence
Calculate only when more than 20 % of sun is covered by the blade
Please look in WTG table

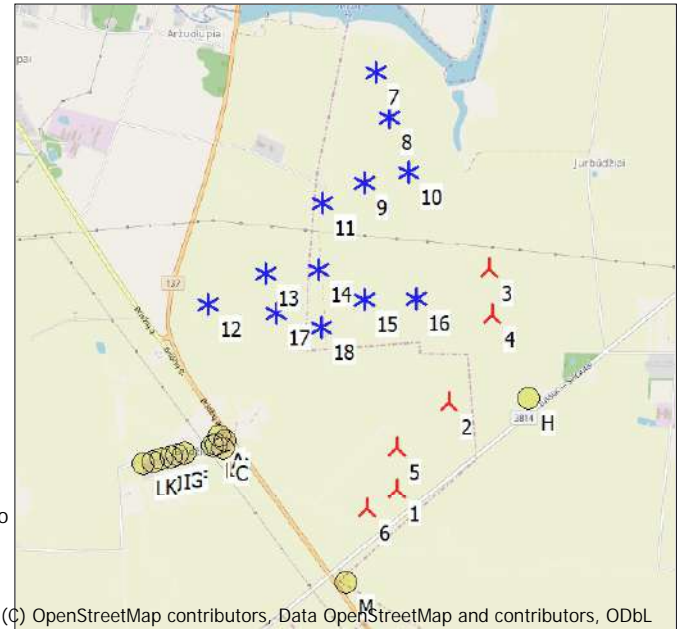
Minimum sun height over horizon for influence 3 °
Day step for calculation 1 days
Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo
Obstacles used in calculation
Eye height for map: 1,5 m
Grid resolution: 1,0 m

All coordinates are in
Lithuanian TM LKS94-LKS94 (LT)



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Scale 1:50.000
New WTG Existing WTG Shadow receptor

WTGs

Y	X	Z	Row data/Description	WTG type		Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
				Valid	Manufact.					Calculation distance [m]	RPM
1	442.261	6.087.347	50,0 ENERCON E-70 E4 20...No	Yes	ENERCON	E-70 E4-2.000	2.000	71,0	85,0	1.643	20,0
2	442.609	6.087.922	50,0 ENERCON E-70 E4 20...No	Yes	ENERCON	E-70 E4-2.000	2.000	71,0	85,0	1.643	20,0
3	442.891	6.088.803	50,3 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
4	442.908	6.088.497	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
5	442.265	6.087.626	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
6	442.058	6.087.221	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
7	442.152	6.090.108	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
8	442.241	6.089.811	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
9	442.064	6.089.378	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
10	442.365	6.089.446	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
11	441.791	6.089.249	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
12	441.022	6.088.592	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
13	441.405	6.088.791	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
14	441.755	6.088.807	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
15	442.055	6.088.609	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
16	442.405	6.088.612	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
17	441.469	6.088.526	50,0 GE WIND ENERGY 5.... Yes	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0
18	441.767	6.088.429	50,0 GE WIND ENERGY 5.... Yes	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0

Shadow receptor-Input

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

To be continued on next page...

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas
 K. Donelaicio str. 55-2
 LT-44245 Kaunas
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 Raminta Survilè / r.survile@infraplanas.lt
 Calculated:
 2021.06.16 14:57/3.4.415

SHADOW - Main Result

Calculation: Suminis poveikis Enercon E70

...continued from previous page

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Calculation Results

Shadow receptor

Shadow, expected values

No. Shadow hours

per year
[h/year]

A	9:22
B	6:59
C	5:40
D	7:48
E	8:06
F	1:56
G	1:41
H	29:22
I	1:31
J	1:58
K	3:03
L	2:31
M	0:00

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Expected [h/year]
1	ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)	13:32	3:43
2	ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)	19:07	7:36
3	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)	0:00	0:00
4	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)	0:00	0:00
5	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)	14:21	4:46
6	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)	18:05	4:43
7	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)	0:00	0:00
8	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)	0:00	0:00
9	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)	0:00	0:00
10	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)	0:00	0:00
11	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)	0:00	0:00
12	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)	0:00	0:00
13	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)	0:00	0:00
14	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)	22:38	9:40
15	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)	32:58	13:47
16	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (11)	17:16	6:40
17	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)	8:59	4:11
18	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)	20:12	9:03

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June			
1	08:53	08:20	07:20	07:46 (1)	07:03	05:51	04:58	05:32 (16)	
	16:10	17:04	18:02	3 07:49 (1)	20:03	21:02	21:54	13 05:45 (16)	
2	08:53	08:19	07:18	07:43 (1)	07:00	05:48	04:57	05:31 (16)	
	16:11	17:06	18:04	7 07:50 (1)	20:05	21:03	21:56	14 05:45 (16)	
3	08:52	08:17	07:16	07:41 (1)	06:57	05:46	04:56	05:31 (16)	
	16:13	17:08	18:06	10 07:51 (1)	20:07	21:05	21:57	16 05:47 (16)	
4	08:52	08:15	07:13	07:38 (1)	06:55	05:44	04:55	05:30 (16)	
	16:14	17:10	18:08	12 07:50 (1)	20:09	21:07	21:58	17 05:47 (16)	
5	08:52	08:13	07:11	07:37 (1)	06:52	05:42	04:55	05:30 (16)	
	16:15	17:12	18:10	14 07:51 (1)	20:11	21:09	21:59	18 05:48 (16)	
6	08:51	08:11	07:08	07:37 (1)	06:50	05:40	04:54	05:30 (16)	
	16:17	17:14	18:12	13 07:50 (1)	20:13	21:11	22:00	19 05:49 (16)	
7	08:51	08:09	07:06	07:37 (1)	06:47	07:12 (2)	05:38	04:53	05:30 (16)
	16:18	17:16	18:14	11 07:48 (1)	20:15	3 07:15 (2)	21:13	22:01	19 05:49 (16)
8	08:50	08:07	07:03	07:39 (1)	06:45	07:09 (2)	05:36	04:52	05:29 (16)
	16:19	17:18	18:16	7 07:46 (1)	20:17	5 07:14 (2)	21:15	22:02	20 05:49 (16)
9	08:50	08:05	07:01	07:07	06:42	07:07 (2)	05:34	04:52	05:30 (16)
	16:21	17:21	18:18	20:19	7 07:14 (2)	21:17	22:03	20 05:50 (16)	
10	08:49	08:03	06:58	06:40	07:04 (2)	05:32	04:51	05:30 (16)	
	16:22	17:23	18:20	20:21	9 07:13 (2)	21:19	22:04	21 05:51 (16)	
11	08:48	08:01	06:56	06:37	07:04 (2)	05:30	04:51	05:29 (16)	
	16:24	17:25	18:22	20:23	8 07:12 (2)	21:20	22:05	21 05:50 (16)	
12	08:47	07:59	06:53	06:35	07:07 (2)	05:28	04:50	05:30 (16)	
	16:26	17:27	18:24	20:25	3 07:10 (2)	21:22	22:06	21 05:51 (16)	
13	08:46	07:57	06:51	06:33	05:26	04:50	05:30 (16)		
	16:27	17:29	18:26	20:27	21:24	22:07	22 05:52 (16)		
14	08:46	07:55	08:22 (6)	06:48	06:30	05:24	04:50	05:29 (16)	
	16:29	17:31	3 08:25 (6)	18:28	20:29	21:26	22:07	22 05:51 (16)	
15	08:45	07:53	08:19 (6)	06:46	06:28	05:23	04:49	05:30 (16)	
	16:31	17:33	7 08:26 (6)	18:30	20:31	21:28	22:08	22 05:52 (16)	
16	08:44	07:50	08:17 (6)	06:43	06:25	05:21	04:49	05:30 (16)	
	16:33	17:35	10 08:27 (6)	18:32	20:33	21:29	22:09	22 05:52 (16)	
17	08:42	07:48	08:15 (6)	06:41	06:23	05:19	04:49	05:30 (16)	
	16:34	17:37	13 08:28 (6)	18:34	20:34	21:31	22:09	22 05:52 (16)	
18	08:41	07:46	08:12 (6)	06:38	06:20	05:17	04:49	05:30 (16)	
	16:36	17:39	15 08:27 (6)	18:36	20:36	21:33	22:10	22 05:52 (16)	
19	08:40	07:44	08:10 (6)	06:36	07:00 (5)	06:18	05:16	04:49	05:30 (16)
	16:38	17:42	17 08:27 (6)	18:38	2 07:02 (5)	20:38	21:35	22:10	23 05:53 (16)
20	08:39	07:41	08:10 (6)	06:33	06:57 (5)	06:16	05:14	04:49	05:30 (16)
	16:40	17:44	18 08:28 (6)	18:40	6 07:03 (5)	20:40	21:36	22:10	23 05:53 (16)
21	08:38	07:39	08:10 (6)	06:31	06:55 (5)	06:13	05:13	04:49	05:31 (16)
	16:42	17:46	16 08:26 (6)	18:42	9 07:04 (5)	20:42	21:38	22:11	23 05:54 (16)
22	08:36	07:37	08:11 (6)	06:28	06:52 (5)	06:11	05:11	04:49	05:31 (16)
	16:44	17:48	15 08:26 (6)	18:44	11 07:03 (5)	20:44	21:40	22:11	23 05:54 (16)
23	08:35	07:35	08:12 (6)	06:25	06:50 (5)	06:09	05:10	04:49	05:31 (16)
	16:46	17:50	12 08:24 (6)	18:46	14 07:04 (5)	20:46	21:41	22:11	23 05:54 (16)
24	08:33	07:32	08:14 (6)	06:23	06:47 (5)	06:06	05:08	04:50	05:31 (16)
	16:48	17:52	8 08:22 (6)	18:48	16 07:03 (5)	20:48	21:43	22:11	23 05:54 (16)
25	08:32	07:30	06:20	06:47 (5)	06:04	05:07	04:50	05:32 (16)	
	16:50	17:54	14 07:01 (5)	20:50	21:44	22:11	22 05:54 (16)		
26	08:30	07:28	06:18	06:48 (5)	06:02	05:05	04:51	05:32 (16)	
	16:52	17:56	13 07:01 (5)	20:52	21:46	22:11	22 05:54 (16)		
27	08:29	07:25	06:15	06:49 (5)	05:59	05:04	04:51	05:33 (16)	
	16:54	17:58	9 06:58 (5)	20:54	21:47	22:11	22 05:55 (16)		
28	08:27	07:23	06:13	05:57	05:03	04:52	05:32 (16)		
	16:56	18:00	18:56	20:56	21:49	22:11	22 05:54 (16)		
29	08:26		07:10	05:55	05:02	04:52	05:33 (16)		
	16:58		19:58	20:58	21:50	4 05:40 (16)	22:10	22 05:55 (16)	
30	08:24		07:08	05:53	05:00	05:34 (16)	04:53	05:34 (16)	
	17:00		20:00	21:00	21:52	8 05:42 (16)	22:10	21 05:55 (16)	
31	08:22		07:05		04:59	05:33 (16)			
	17:02		20:01		21:53	11 05:44 (16)			
Potential sun hours	244	270	366	422	499	517			
Total, worst case		134	171	35	23	620			
Sun reduction		0,24	0,34	0,39	0,52	0,48			
Oper. time red.		1,00	1,00	1,00	1,00	1,00			
Wind dir. red.		0,91	0,98	0,98	0,80	0,80			
Total reduction		0,23	0,34	0,39	0,42	0,39			
Total, real		30	58	14	10	245			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December				
1	04:54	05:33 (16)	05:36	06:33	07:03 (2)	07:29	07:30	08:27		
	22:10	05:55 (16)	21:32	20:23	07:11 (2)	19:07	16:53	16:06		
2	04:54	05:34 (16)	05:37	06:35	07:03 (2)	07:31	07:32	08:29		
	22:09	05:55 (16)	21:30	20:20	07:12 (2)	19:04	16:51	16:05		
3	04:55	05:35 (16)	05:39	06:36	07:05 (2)	07:32	07:34	08:30		
	22:09	05:55 (16)	21:29	20:18	07:12 (2)	19:01	16:49	16:05		
4	04:56	05:35 (16)	05:41	06:38	07:06 (2)	07:34	07:36	08:32		
	22:08	05:55 (16)	21:27	20:15	07:11 (2)	18:59	16:47	16:04		
5	04:57	05:36 (16)	05:43	06:40	07:08 (2)	07:36	08:18 (1)	07:38	08:34	
	22:08	05:55 (16)	21:25	20:13	07:11 (2)	18:56	4	08:22 (1)	16:45	16:03
6	04:58	05:35 (16)	05:45	06:42	07:38	08:15 (1)	07:40	08:35		
	22:07	05:54 (16)	21:23	20:10	18:54	9	08:24 (1)	16:43	16:03	
7	04:59	05:36 (16)	05:46	06:44	07:40	08:14 (1)	07:42	08:36		
	22:06	05:54 (16)	21:21	20:08	18:51	11	08:25 (1)	16:41	16:02	
8	05:00	05:37 (16)	05:48	06:46	07:42	08:13 (1)	07:44	08:38		
	22:06	05:54 (16)	21:18	20:05	18:49	13	08:26 (1)	16:39	16:02	
9	05:01	05:37 (16)	05:50	06:48	07:44	08:12 (1)	07:46	08:39		
	22:05	05:54 (16)	21:16	20:03	18:46	14	08:26 (1)	16:37	16:01	
10	05:02	05:38 (16)	05:52	06:49	07:46	08:14 (1)	07:48	08:40		
	22:04	05:53 (16)	21:14	20:00	18:44	11	08:25 (1)	16:35	16:01	
11	05:03	05:40 (16)	05:54	06:51	07:48	08:16 (1)	07:50	08:41		
	22:03	05:54 (16)	21:12	19:58	18:41	9	08:25 (1)	16:34	16:01	
12	05:05	05:41 (16)	05:55	06:53	07:50	08:18 (1)	07:52	08:43		
	22:02	05:53 (16)	21:10	19:55	18:39	5	08:23 (1)	16:32	16:00	
13	05:06	05:42 (16)	05:57	06:55	07:52	08:20 (1)	07:54	08:44		
	22:01	05:51 (16)	21:08	19:53	18:37	1	08:21 (1)	16:30	16:00	
14	05:07	05:43 (16)	05:59	06:57	07:54	07:56	07:56	08:45		
	22:00	05:50 (16)	21:06	19:50	18:34	16:28	16:28	16:00		
15	05:08	06:01	06:59	07:56	07:58	08:46				
	21:59	21:03	19:47	18:32	16:27	16:00				
16	05:10	06:03	07:01	07:58	08:00	08:47				
	21:58	21:01	19:45	8	07:47 (5)	18:29	16:25	16:00		
17	05:11	06:05	07:02	07:37 (5)	08:00	08:48 (6)	08:02	08:47		
	21:56	20:59	19:42	12	07:49 (5)	18:27	3	08:51 (6)	16:23	16:00
18	05:13	06:07	07:04	07:36 (5)	08:02	08:44 (6)	08:04	08:48		
	21:55	20:57	19:40	14	07:50 (5)	18:25	10	08:54 (6)	16:22	16:00
19	05:14	06:08	07:06	07:34 (5)	08:04	08:42 (6)	08:06	08:49		
	21:54	20:54	19:37	15	07:49 (5)	18:22	14	08:56 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:41 (6)	08:08	08:50		
	21:52	20:52	19:35	14	07:49 (5)	18:20	16	08:57 (6)	16:19	16:01
21	05:17	06:12	07:10	07:37 (5)	08:08	08:40 (6)	08:10	08:50		
	21:51	20:50	19:32	12	07:49 (5)	18:18	17	08:57 (6)	16:18	16:01
22	05:19	06:14	07:12	07:39 (5)	08:10	08:40 (6)	08:12	08:51		
	21:49	20:47	19:30	9	07:48 (5)	18:15	18	08:58 (6)	16:16	16:02
23	05:20	06:16	07:14	07:41 (5)	08:12	08:41 (6)	08:13	08:51		
	21:48	20:45	19:27	7	07:48 (5)	18:13	17	08:58 (6)	16:15	16:02
24	05:22	06:18	07:16	07:43 (5)	08:14	08:43 (6)	08:15	08:52		
	21:46	20:42	19:24	3	07:46 (5)	18:11	14	08:57 (6)	16:14	16:03
25	05:24	06:20	07:17	07:16	07:16	07:45 (6)	08:17	08:52		
	21:45	20:40	19:22	17:08	12	07:57 (6)	16:12	16:04		
26	05:25	06:22	07:19	07:18	07:18	07:47 (6)	08:19	08:52		
	21:43	20:38	19:19	17:06	9	07:56 (6)	16:11	16:04		
27	05:27	06:23	07:21	07:20	07:20	07:49 (6)	08:21	08:53		
	21:41	20:35	19:17	17:04	6	07:55 (6)	16:10	16:05		
28	05:29	06:25	07:23	07:22	07:22	07:52 (6)	08:22	08:53		
	21:40	20:33	19:14	17:02	2	07:54 (6)	16:09	16:06		
29	05:30	06:27	07:25	07:24	07:24	08:24	08:24	08:53		
	21:38	20:30	19:12	17:00	16:08	16:07				
30	05:32	06:29	07:27	07:26	08:26	08:53				
	21:36	20:28	19:09	16:57	16:07	16:08				
31	05:34	06:31	07:06 (2)	07:28	08:53					
	21:34	20:25	3	07:09 (2)	16:55	16:09				
Potential sun hours	519	464	383	327	254	227				
Total, worst case	230	3	126	215						
Sun reduction	0,49	0,52	0,40	0,31						
Oper. time red.	1,00	1,00	1,00	1,00						
Wind dir. red.	0,80	0,98	1,00	0,93						
Total reduction	0,40	0,52	0,40	0,29						
Total, real	91	2	50	62						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (1) 07:46 (1)	06:57 20:07	05:46 21:05
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (1) 07:46 (1)	06:55 20:09	05:44 21:07
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 07:47 (1)	06:52 20:11	05:42 21:09
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:47 (1)	06:50 20:13	05:40 21:11
7	08:51 16:18	08:09 17:16	07:06 18:14	07:32 (1) 07:46 (1)	06:47 20:15	05:38 21:13
8	08:50 16:19	08:07 17:18	07:03 18:16	07:33 (1) 07:46 (1)	06:45 20:17	05:36 21:15
9	08:50 16:21	08:05 17:21	07:01 18:18	07:33 (1) 07:44 (1)	06:42 20:19	05:34 21:17
10	08:49 16:22	08:03 17:23	06:58 18:20	07:35 (1) 07:43 (1)	06:40 20:21	05:32 21:19
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:02 (2) 07:09 (2)	05:30 21:20
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:00 (2) 07:09 (2)	05:28 21:22
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	06:58 (2) 07:07 (2)	05:26 21:24
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	06:59 (2) 07:06 (2)	05:24 21:26
15	08:45 16:31	07:53 17:33	08:19 (6) 08:21 (6)	06:46 18:30	06:28 20:31	05:23 21:28
16	08:44 16:33	07:50 17:35	08:17 (6) 08:23 (6)	06:43 18:32	06:25 20:33	05:21 21:29
17	08:42 16:34	07:48 17:37	08:15 (6) 08:24 (6)	06:41 18:34	06:23 20:34	05:19 21:31
18	08:41 16:36	07:46 17:39	08:12 (6) 08:24 (6)	06:38 18:36	06:20 20:36	05:17 21:33
19	08:40 16:38	07:44 17:42	08:10 (6) 08:25 (6)	06:36 18:38	06:18 20:38	05:16 21:35
20	08:39 16:40	07:41 17:44	08:08 (6) 08:26 (6)	06:33 18:40	06:16 20:40	05:14 21:36
21	08:38 16:42	07:39 17:46	08:06 (6) 08:25 (6)	06:31 18:42	06:13 20:42	05:13 21:38
22	08:36 16:44	07:37 17:48	08:07 (6) 08:25 (6)	06:28 18:44	06:11 20:44	05:11 21:40
23	08:35 16:46	07:35 17:50	08:07 (6) 08:24 (6)	06:25 18:46	06:09 20:46	05:10 21:41
24	08:33 16:48	07:32 17:52	08:08 (6) 08:23 (6)	06:23 18:48	06:06 20:48	05:08 21:43
25	08:32 16:50	07:30 17:54	08:08 (6) 08:21 (6)	06:20 18:50	06:04 20:50	05:07 21:44
26	08:30 16:52	07:28 17:56	08:11 (6) 08:19 (6)	06:18 18:52	06:02 20:52	05:05 21:46
27	08:29 16:54	07:25 17:58	06:15 18:54	06:40 (5) 06:56 (5)	05:59 20:54	05:04 21:47
28	08:27 16:56	07:23 18:00	06:13 18:56	06:41 (5) 06:56 (5)	05:57 20:56	05:03 21:49
29	08:26 16:58	07:21 18:02	06:11 18:58	07:41 (5) 07:54 (5)	05:55 20:58	05:02 21:50
30	08:24 17:00	07:19 18:04	06:09 19:00	07:43 (5) 07:52 (5)	05:53 21:00	05:00 21:52
31	08:22 17:02	07:17 18:06	06:07 19:02	07:52 (5)	21:00	04:59 21:53
Potential sun hours	244	270	366	422	499	517
Total, worst case			152	188	37	382
Sun reduction			0,24	0,34	0,39	0,48
Oper. time red.			1,00	1,00	1,00	1,00
Wind dir. red.			0,91	0,99	0,98	0,78
Total reduction			0,23	0,34	0,39	0,39
Total, real			35	64	15	147

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December					
1	04:54	05:30 (16)	05:36	06:33	07:01 (2)	07:29	07:30	08:27			
	22:10	05:44 (16)	21:32	20:23	07:08 (2)	19:07	16:53	16:06			
2	04:54	05:31 (16)	05:37	06:35	07:03 (2)	07:31	07:32	08:29			
	22:09	05:44 (16)	21:30	20:20	07:07 (2)	19:04	16:51	16:05			
3	04:55	05:32 (16)	05:39	06:36	07:05 (2)	07:32	08:14 (1)	07:34	08:30		
	22:09	05:44 (16)	21:29	20:18	07:06 (2)	19:01	08:20 (1)	16:49	16:05		
4	04:56	05:33 (16)	05:41	06:38		07:34	08:12 (1)	07:36	08:32		
	22:08	05:44 (16)	21:27	20:15		18:59	08:22 (1)	16:47	16:04		
5	04:57	05:34 (16)	05:43	06:40		07:36	08:10 (1)	07:38	08:33		
	22:08	05:44 (16)	21:25	20:13		18:56	08:23 (1)	16:45	16:03		
6	04:58	05:34 (16)	05:45	06:42		07:38	08:09 (1)	07:40	08:35		
	22:07	05:42 (16)	21:23	20:10		18:54	08:23 (1)	16:43	16:03		
7	04:59	05:36 (16)	05:46	06:44		07:40	08:09 (1)	07:42	08:36		
	22:06	05:40 (16)	21:21	20:08		18:51	08:23 (1)	16:41	16:02		
8	05:00		05:48	06:46		07:42	08:10 (1)	07:44	08:38		
	22:06		21:18	20:05		18:49	08:23 (1)	16:39	16:02		
9	05:01		05:50	06:48		07:44	08:12 (1)	07:46	08:39		
	22:05		21:16	20:03		18:46	08:22 (1)	16:37	16:01		
10	05:02		05:52	06:49		07:46	08:14 (1)	07:48	08:40		
	22:04		21:14	20:00		18:44	08:21 (1)	16:35	16:01		
11	05:03		05:54	06:51		07:48	08:16 (1)	07:50	08:41		
	22:03		21:12	19:58		18:41	08:19 (1)	16:34	16:01		
12	05:05		05:55	06:53		07:50		07:52	08:43		
	22:02		21:10	19:55		18:39		16:32	16:00		
13	05:06		05:57	06:55		07:52		07:54	08:44		
	22:01		21:08	19:53	8	07:43 (5)	18:37	16:30	16:00		
14	05:07		05:59	06:57		07:54		07:56	08:45		
	22:00		21:06	19:50	12	07:44 (5)	18:34	16:28	16:00		
15	05:08		06:01	06:59		07:56		08:46 (6)	07:58	08:46	
	21:59		21:03	19:47	14	07:45 (5)	18:32	3	08:49 (6)	16:27	16:00
16	05:10		06:03	07:01		07:58		08:42 (6)	08:00	08:47	
	21:58		21:01	19:45	16	07:46 (5)	18:29	10	08:52 (6)	16:25	16:00
17	05:11		06:05	07:02		08:00		08:40 (6)	08:02	08:47	
	21:56		20:59	19:42	16	07:46 (5)	18:27	14	08:54 (6)	16:23	16:00
18	05:13		06:07	07:04		08:02		08:39 (6)	08:04	08:48	
	21:55		20:57	19:40	14	07:46 (5)	18:25	16	08:55 (6)	16:22	16:00
19	05:14		06:08	07:06		08:04		08:38 (6)	08:06	08:49	
	21:54		20:54	19:37	11	07:44 (5)	18:22	17	08:55 (6)	16:20	16:01
20	05:16		06:10	07:08		08:06		08:37 (6)	08:08	08:50	
	21:52		20:52	19:35	8	07:43 (5)	18:20	18	08:55 (6)	16:19	16:01
21	05:17		06:12	07:10		08:08		08:37 (6)	08:10	08:50	
	21:51		20:50	19:32	5	07:42 (5)	18:18	18	08:55 (6)	16:18	16:01
22	05:19		06:14	07:12		08:10		08:39 (6)	08:12	08:51	
	21:49		20:47	19:30	1	07:40 (5)	18:15	17	08:56 (6)	16:16	16:02
23	05:20		06:16	07:14		08:12		08:41 (6)	08:13	08:51	
	21:48		20:45	19:27		18:13	14	08:55 (6)	16:15	16:02	
24	05:22		06:18	07:16		08:14		08:43 (6)	08:15	08:52	
	21:46		20:42	19:24		18:11	11	08:54 (6)	16:14	16:03	
25	05:24		06:20	07:17		07:16		07:45 (6)	08:17	08:52	
	21:45		20:40	19:22		17:08	8	07:53 (6)	16:12	16:04	
26	05:25		06:22	07:19		07:18		07:47 (6)	08:19	08:52	
	21:43		20:38	19:19		17:06	5	07:52 (6)	16:11	16:04	
27	05:27		06:23	07:21		07:20		07:49 (6)	08:21	08:53	
	21:41		20:35	19:17		17:04	1	07:50 (6)	16:10	16:05	
28	05:29		06:25	07:23		07:22		08:22	08:22	08:53	
	21:40		20:33	19:14		17:02		16:09	16:06	16:06	
29	05:30		06:27	07:00 (2)	07:25	07:24		08:24	08:24	08:53	
	21:38		20:30	7	07:07 (2)	19:12		17:00	16:08	16:07	
30	05:32		06:29	06:58 (2)	07:27	07:26		08:26	08:26	08:53	
	21:36		20:28	10	07:08 (2)	19:09		16:07	16:07	16:08	
31	05:34		06:31	06:59 (2)		07:28			08:53	08:53	
	21:34		20:25	9	07:08 (2)	16:55			16:09	16:09	
Potential sun hours	519	464		383		327		254		227	
Total, worst case	72		26		117		242				
Sun reduction	0,49		0,52		0,40		0,31				
Oper. time red.	1,00		1,00		1,00		1,00				
Wind dir. red.	0,78		0,98		1,00		0,94				
Total reduction	0,39		0,51		0,40		0,29				
Total, real	28		13		47		71				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 18:12 (6)	07:33 (5) 05:51	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 18:09 (6)	07:33 (5) 05:48	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:36 (5) 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	07:41 (5) 21:05	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	07:41 (5) 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	07:33 (1) 21:11	04:54 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	07:35 (1) 21:13	04:53 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	07:37 (1) 21:15	04:52 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	07:37 (1) 21:17	04:52 22:03
10	08:49 16:22	08:03 17:23	06:58 18:20	06:40 20:21	07:37 (1) 21:19	04:51 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:23 (1) 21:20	04:51 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:24 (1) 21:22	04:50 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	07:00 (2) 21:24	04:50 22:07
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	07:02 (2) 21:26	04:50 22:08
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	07:02 (2) 21:28	04:49 22:09
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	07:01 (2) 21:29	04:49 22:10
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	07:00 (2) 21:31	04:49 22:11
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	06:58 (2) 21:33	04:49 22:12
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	07:02 (2) 21:35	04:49 22:13
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	06:54 (2) 21:36	04:49 22:14
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	07:00 (2) 21:38	04:49 22:15
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	07:02 (2) 21:40	04:49 22:16
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	07:00 (2) 21:41	04:49 22:17
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	07:02 (2) 21:43	04:50 22:18
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	07:00 (2) 21:44	04:50 22:19
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	07:02 (2) 21:46	04:51 22:20
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	07:00 (2) 21:47	04:51 22:21
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	07:02 (2) 21:49	04:52 22:22
29	08:26 16:58	07:21 18:02	06:11 18:58	05:55 20:58	07:00 (2) 21:50	04:52 22:23
30	08:24 17:00	07:19 18:04	06:09 19:00	05:53 21:00	07:02 (2) 21:52	04:53 22:24
31	08:22 17:02	07:17 18:06	06:07 19:02	05:51 21:02	07:00 (2) 21:53	04:53 22:25
Potential sun hours	244	270	366	422	499	517
Total, worst case		124	178	65		239
Sun reduction		0,24	0,34	0,39		0,48
Oper. time red.		1,00	1,00	1,00		1,00
Wind dir. red.		0,93	0,98	0,98		0,77
Total reduction		0,23	0,34	0,39		0,38
Total, real		29	60	26		91

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	July	August	September	October	November	December			
1	04:54	05:29 (16)	05:36	06:33	07:29	08:04 (1)	07:30	08:27	
	22:10	05:37 (16)	21:32	20:23	19:07	08:15 (1)	16:53	16:06	
2	04:54	05:31 (16)	05:37	06:35	07:31	08:02 (1)	07:32	08:29	
	22:09	05:37 (16)	21:30	20:20	19:04	08:15 (1)	16:51	16:05	
3	04:55	05:33 (16)	05:39	06:36	07:32	08:02 (1)	07:34	08:30	
	22:09	05:35 (16)	21:29	20:18	19:01	08:16 (1)	16:49	16:05	
4	04:56		05:41	06:38	07:34	08:02 (1)	07:36	08:32	
	22:08		21:27	20:15	18:59	08:15 (1)	16:47	16:04	
5	04:57		05:43	06:40	07:36	08:04 (1)	07:38	08:33	
	22:08		21:25	20:13	18:56	08:15 (1)	16:45	16:03	
6	04:58		05:45	06:42	07:38	08:06 (1)	07:40	08:35	
	22:07		21:23	20:10	18:54	08:14 (1)	16:43	16:03	
7	04:59		05:46	06:44	07:40	08:08 (1)	07:42	08:36	
	22:06		21:21	20:08	18:51	08:12 (1)	16:41	16:02	
8	05:00		05:48	06:46	07:42		07:44	08:38	
	22:06		21:18	20:05	18:49		16:39	16:02	
9	05:01		05:50	06:48	07:44		07:46	08:39	
	22:05		21:16	20:03	4 07:34 (5)	18:46	16:37	16:01	
10	05:02		05:52	06:49	07:46		07:48	08:40	
	22:04		21:14	20:00	10 07:37 (5)	18:44	16:35	16:01	
11	05:03		05:54	06:51	07:48	08:36 (6)	07:50	08:41	
	22:03		21:12	19:58	13 07:38 (5)	18:41	5 08:41 (6)	16:34	16:01
12	05:05		05:55	06:53	07:50	08:33 (6)	07:52	08:43	
	22:02		21:10	19:55	15 07:39 (5)	18:39	11 08:44 (6)	16:32	16:00
13	05:06		05:57	06:55	07:52	08:31 (6)	07:54	08:44	
	22:01		21:08	19:53	16 07:39 (5)	18:37	14 08:45 (6)	16:30	16:00
14	05:07		05:59	06:57	07:54	08:30 (6)	07:56	08:45	
	22:00		21:06	19:50	14 07:38 (5)	18:34	16 08:46 (6)	16:28	16:00
15	05:09		06:01	06:59	07:56	08:29 (6)	07:58	08:46	
	21:59		21:03	19:47	12 07:38 (5)	18:32	17 08:46 (6)	16:27	16:00
16	05:10		06:03	07:01	07:58	08:28 (6)	08:00	08:47	
	21:58		21:01	19:45	9 07:37 (5)	18:29	19 08:47 (6)	16:25	16:00
17	05:11		06:05	07:02	08:00	08:28 (6)	08:02	08:47	
	21:56		20:59	19:42	6 07:36 (5)	18:27	18 08:46 (6)	16:23	16:00
18	05:13		06:07	07:04	08:02	08:30 (6)	08:04	08:48	
	21:55		20:57	19:40	3 07:35 (5)	18:25	16 08:46 (6)	16:22	16:00
19	05:14		06:08	07:06	08:04	08:32 (6)	08:06	08:49	
	21:54		20:54	19:37		18:22	13 08:45 (6)	16:20	16:01
20	05:16		06:10	07:08	08:06	08:34 (6)	08:08	08:50	
	21:52		20:52	19:35		18:20	10 08:44 (6)	16:19	16:01
21	05:17		06:12	07:10	08:08	08:36 (6)	08:10	08:50	
	21:51		20:50	19:32		18:18	7 08:43 (6)	16:18	16:01
22	05:19		06:14	07:12	08:10	08:39 (6)	08:12	08:51	
	21:49		20:47	19:30		18:15	3 08:42 (6)	16:16	16:02
23	05:20		06:16	07:14	08:12		08:13	08:51	
	21:48		20:45	19:27		18:13		16:15	16:02
24	05:22		06:18	07:16	08:14		08:15	08:52	
	21:46		20:42	19:24		18:11		16:14	16:03
25	05:24		06:20	07:17	08:16		08:17	08:52	
	21:45		20:40	19:22		17:08		16:12	16:04
26	05:25		06:22	06:55 (2)	07:19	07:18	08:19	08:52	
	21:43		20:38	5 07:00 (2)	19:19	17:06	16:11	16:04	
27	05:27		06:23	06:54 (2)	07:21	07:20	08:21	08:53	
	21:41		20:35	8 07:02 (2)	19:17	17:04	16:10	16:05	
28	05:29		06:25	06:54 (2)	07:23	07:22	08:22	08:53	
	21:40		20:33	9 07:03 (2)	19:14	17:02	16:09	16:06	
29	05:30		06:27	06:56 (2)	07:25	07:24	08:24	08:53	
	21:38		20:30	7 07:03 (2)	19:12	17:00	16:08	16:07	
30	05:32		06:29	06:58 (2)	07:27	8 08:05 (1)	07:26	08:53	
	21:36		20:28	5 07:03 (2)	19:09	8 08:13 (1)	16:57	16:08	
31	05:34		06:31	06:59 (2)	07:28			08:53	
	21:34		20:25	3 07:02 (2)	16:55			16:09	
Potential sun hours	519	464	383	327	254	227			
Total, worst case	16	37	110	223					
Sun reduction	0,49	0,52	0,40	0,31					
Oper. time red.	1,00	1,00	1,00	1,00					
Wind dir. red.	0,77	0,97	1,00	0,95					
Total reduction	0,38	0,51	0,40	0,30					
Total, real	6	19	44	66					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June						
1	08:53	08:20	07:20	08:06 (6)	07:03	05:51	04:58					
	16:10	17:04	18:02	2	08:08 (6)	20:03	21:02	21:54				
2	08:53	08:19	07:18		07:00	05:48	04:57	05:30 (16)				
	16:11	17:06	18:04		20:05	21:03	21:56	7	05:37 (16)			
3	08:52	08:17	07:16		06:57	05:46	04:56	05:30 (16)				
	16:13	17:08	18:06		20:07	21:05	21:57	9	05:39 (16)			
4	08:52	08:15	07:13		06:55	05:44	04:55	05:29 (16)				
	16:14	17:10	18:08		20:09	21:07	21:58	11	05:40 (16)			
5	08:52	08:13	07:11		07:36 (1)	06:52	05:42	04:55	05:28 (16)			
	16:15	17:12	18:10	4	07:40 (1)	20:11	21:09	21:59	13	05:41 (16)		
6	08:51	08:11	07:08		07:33 (1)	06:50	05:40	04:54	05:28 (16)			
	16:17	17:14	18:12	7	07:40 (1)	20:13	21:11	22:00	14	05:42 (16)		
7	08:51	08:09	07:06		07:30 (1)	06:47	05:38	04:53	05:27 (16)			
	16:18	17:16	18:14	10	07:40 (1)	20:15	21:13	22:01	16	05:43 (16)		
8	08:50	08:07	07:03		07:28 (1)	06:45	05:36	04:52	05:27 (16)			
	16:19	17:18	18:16	13	07:41 (1)	20:17	21:15	22:02	16	05:43 (16)		
9	08:50	08:05	07:01		07:27 (1)	06:42	05:34	04:52	05:27 (16)			
	16:21	17:21	18:18	13	07:40 (1)	20:19	21:17	22:03	17	05:44 (16)		
10	08:49	08:03	06:58		07:28 (1)	06:40	05:32	04:51	05:27 (16)			
	16:22	17:23	18:20	12	07:40 (1)	20:21	3	07:04 (2)	21:19	22:04	18	05:45 (16)
11	08:48	08:01	06:56		07:28 (1)	06:37	07:02 (2)	05:30	04:51	05:26 (16)		
	16:24	17:25	18:22	10	07:38 (1)	20:23	5	07:07 (2)	21:20	22:05	18	05:44 (16)
12	08:47	07:59	06:53		07:31 (1)	06:35	07:00 (2)	05:28	04:50	05:27 (16)		
	16:26	17:27	18:24	5	07:36 (1)	20:25	7	07:07 (2)	21:22	22:06	18	05:45 (16)
13	08:46	07:57	06:51		06:33	06:57 (2)	05:26	04:50	05:27 (16)			
	16:27	17:29	18:26		20:27	9	07:06 (2)	21:24	22:07	19	05:46 (16)	
14	08:46	07:55	06:48		06:30	06:58 (2)	05:24	04:50	05:26 (16)			
	16:29	17:31	18:28		20:29	7	07:05 (2)	21:26	22:07	19	05:45 (16)	
15	08:45	07:53	06:46		06:28	05:23	04:49	05:26 (16)				
	16:31	17:33	18:30		20:31	21:28	22:08	20	05:46 (16)			
16	08:44	07:50	06:43		06:25	05:21	04:49	05:27 (16)				
	16:33	17:35	18:32		20:33	21:29	22:09	19	05:46 (16)			
17	08:42	07:48	06:41		06:23	05:19	04:49	05:27 (16)				
	16:34	17:37	18:34		20:34	21:31	22:09	20	05:47 (16)			
18	08:41	07:46	06:38		06:20	05:17	04:49	05:27 (16)				
	16:36	17:39	18:36		20:36	21:33	22:10	20	05:47 (16)			
19	08:40	07:44	08:10 (6)	06:36	06:18	05:16	04:49	05:27 (16)				
	16:38	17:42	5	08:15 (6)	18:38	20:38	22:10	20	05:47 (16)			
20	08:39	07:41	08:08 (6)	06:33	06:16	05:14	04:49	05:27 (16)				
	16:40	17:44	8	08:16 (6)	18:40	20:40	22:10	20	05:47 (16)			
21	08:38	07:39	08:05 (6)	06:31	06:13	05:13	04:49	05:28 (16)				
	16:42	17:46	11	08:16 (6)	18:42	21:38	22:11	20	05:48 (16)			
22	08:36	07:37	08:03 (6)	06:28	06:11	05:11	04:49	05:28 (16)				
	16:44	17:48	14	08:17 (6)	18:44	21:40	22:11	20	05:48 (16)			
23	08:35	07:35	08:00 (6)	06:25	06:50 (5)	06:09	05:10	04:49	05:28 (16)			
	16:46	17:50	16	08:16 (6)	18:46	3	06:53 (5)	20:46	21:41	22:11	20	05:48 (16)
24	08:33	07:32	07:59 (6)	06:23	06:47 (5)	06:06	05:08	04:50	05:28 (16)			
	16:48	17:52	17	08:16 (6)	18:48	6	06:53 (5)	20:48	21:43	22:11	20	05:48 (16)
25	08:32	07:30	07:59 (6)	06:20	06:44 (5)	06:04	05:07	04:50	05:29 (16)			
	16:50	17:54	16	08:15 (6)	18:50	9	06:53 (5)	20:50	21:44	22:11	20	05:49 (16)
26	08:30	07:28	08:00 (6)	06:18	06:42 (5)	06:02	05:05	04:51	05:29 (16)			
	16:52	17:56	15	08:15 (6)	18:52	12	06:54 (5)	20:52	21:46	22:11	19	05:48 (16)
27	08:29	07:25	08:01 (6)	06:15	06:39 (5)	05:59	05:04	04:51	05:30 (16)			
	16:54	17:58	13	08:14 (6)	18:54	14	06:53 (5)	20:54	21:47	22:11	19	05:49 (16)
28	08:27	07:23	08:02 (6)	06:13	06:38 (5)	05:57	05:03	04:52	05:29 (16)			
	16:56	18:00	10	08:12 (6)	18:56	15	06:53 (5)	20:56	21:49	22:11	20	05:49 (16)
29	08:26			07:10	07:37 (5)	05:55	05:02	04:52	05:30 (16)			
	16:58			19:58	14	07:51 (5)	20:58	21:50	22:10	19	05:49 (16)	
30	08:24			07:08	07:39 (5)	05:53	05:00	04:53	05:31 (16)			
	17:00			20:00	11	07:50 (5)	21:00	21:52	22:10	18	05:49 (16)	
31	08:22			07:05	07:40 (5)		04:59					
	17:02			20:01	7	07:47 (5)	21:53					
Potential sun hours	244	270	366	422	499	517						
Total, worst case			125	167	31	509						
Sun reduction			0,24	0,34	0,39	0,48						
Oper. time red.			1,00	1,00	1,00	1,00						
Wind dir. red.			0,93	0,99	0,98	0,79						
Total reduction			0,23	0,34	0,39	0,39						
Total, real			29	57	12	199						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December			
1	04:54	05:31 (16)	05:36	06:33	07:01 (2)	07:29	07:30	08:27	
	22:10	05:49 (16)	21:32	20:23	07:06 (2)	19:07	16:53	16:06	
2	04:54	05:31 (16)	05:37	06:35	07:03 (2)	07:31	08:08 (1)	07:32	08:29
	22:09	05:49 (16)	21:30	20:20	07:06 (2)	19:04	08:16 (1)	16:51	16:05
3	04:55	05:32 (16)	05:39	06:36		07:32	08:06 (1)	07:34	08:30
	22:09	05:49 (16)	21:29	20:18		19:01	08:17 (1)	16:49	16:05
4	04:56	05:33 (16)	05:41	06:38		07:34	08:05 (1)	07:36	08:32
	22:08	05:49 (16)	21:27	20:15		18:59	08:18 (1)	16:47	16:04
5	04:57	05:33 (16)	05:43	06:40		07:36	08:04 (1)	07:38	08:33
	22:08	05:49 (16)	21:25	20:13		18:56	08:18 (1)	16:45	16:03
6	04:58	05:33 (16)	05:45	06:42		07:38	08:06 (1)	07:40	08:35
	22:07	05:48 (16)	21:23	20:10		18:54	08:17 (1)	16:43	16:03
7	04:59	05:34 (16)	05:46	06:44		07:40	08:08 (1)	07:42	08:36
	22:06	05:48 (16)	21:21	20:08		18:51	08:17 (1)	16:41	16:02
8	05:00	05:35 (16)	05:48	06:46		07:42	08:10 (1)	07:44	08:38
	22:06	05:47 (16)	21:18	20:05		18:49	08:16 (1)	16:39	16:02
9	05:01	05:36 (16)	05:50	06:48		07:44	08:12 (1)	07:46	08:39
	22:05	05:46 (16)	21:16	20:03		18:46	08:14 (1)	16:37	16:01
10	05:02	05:37 (16)	05:52	06:49		07:46		07:48	08:40
	22:04	05:45 (16)	21:14	20:00		18:44		16:35	16:01
11	05:03	05:40 (16)	05:54	06:51		07:48		07:50	08:41
	22:03	05:44 (16)	21:12	19:58		18:41		16:34	16:01
12	05:05		05:55	06:53	07:33 (5)	07:50		07:52	08:43
	22:02		21:10	19:55	07:39 (5)	18:39		16:32	16:00
13	05:06		05:57	06:55	07:30 (5)	07:52	08:37 (6)	07:54	08:44
	22:01		21:08	19:53	07:41 (5)	18:37	08:44 (6)	16:30	16:00
14	05:07		05:59	06:57	07:28 (5)	07:54	08:34 (6)	07:56	08:45
	22:00		21:06	19:50	07:41 (5)	18:34	08:46 (6)	16:28	16:00
15	05:09		06:01	06:59	07:27 (5)	07:56	08:33 (6)	07:58	08:46
	21:59		21:03	19:47	07:42 (5)	18:32	08:47 (6)	16:27	16:00
16	05:10		06:03	07:01	07:28 (5)	07:58	08:31 (6)	08:00	08:47
	21:58		21:01	19:45	07:42 (5)	18:29	08:48 (6)	16:25	16:00
17	05:11		06:05	07:02	07:30 (5)	08:00	08:31 (6)	08:02	08:47
	21:56		20:59	19:42	07:42 (5)	18:27	08:48 (6)	16:23	16:00
18	05:13		06:07	07:04	07:32 (5)	08:02	08:30 (6)	08:04	08:48
	21:55		20:57	19:40	07:42 (5)	18:25	08:48 (6)	16:22	16:00
19	05:14		06:08	07:06	07:33 (5)	08:04	08:32 (6)	08:06	08:49
	21:54		20:54	19:37	07:40 (5)	18:22	08:47 (6)	16:20	16:01
20	05:16		06:10	07:08	07:35 (5)	08:06	08:34 (6)	08:08	08:50
	21:52		20:52	19:35	07:39 (5)	18:20	08:47 (6)	16:19	16:01
21	05:17		06:12	07:10		08:08	08:36 (6)	08:10	08:50
	21:51		20:50	19:32		18:18	08:46 (6)	16:18	16:01
22	05:19		06:14	07:12		08:10	08:39 (6)	08:12	08:51
	21:49		20:47	19:30		18:15	08:46 (6)	16:16	16:02
23	05:20		06:16	07:14		08:12	08:41 (6)	08:13	08:51
	21:48		20:45	19:27		18:13	08:44 (6)	16:15	16:02
24	05:22		06:18	07:16		08:14		08:15	08:52
	21:46		20:42	19:24		18:11		16:14	16:03
25	05:24		06:20	07:17		07:16		08:17	08:52
	21:45		20:40	19:22		17:08		16:12	16:04
26	05:25		06:22	07:19		07:18		08:19	08:52
	21:43		20:38	19:19		17:06		16:11	16:04
27	05:27		06:23	07:21		07:20		08:21	08:53
	21:41		20:35	19:17		17:04		16:10	16:05
28	05:29		06:25	07:23		07:22		08:22	08:53
	21:40		20:33	19:14		17:02		16:09	16:06
29	05:30		06:27	06:59 (2)	07:25	07:24		08:24	08:53
	21:38		20:30	07:06 (2)	19:12	17:00		16:08	16:07
30	05:32		06:29	06:58 (2)	07:27	07:26		08:26	08:53
	21:36		20:28	07:07 (2)	19:09	16:57		16:07	16:08
31	05:34		06:31	06:59 (2)		07:28			08:53
	21:34		20:25	07:06 (2)		16:55			16:09
Potential sun hours	519	464		383		327	254		227
Total, worst case	148		23		100		207		
Sun reduction	0,49		0,52		0,40		0,31		
Oper. time red.	1,00		1,00		1,00		1,00		
Wind dir. red.	0,79		0,98		1,00		0,95		
Total reduction	0,39		0,51		0,40		0,30		
Total, real	58		12		40		61		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June		
1	08:53	08:20	07:20	07:58 (6)	07:03	05:51		05:30 (16)
	16:10	17:04	18:02	11 08:09 (6)	20:03	21:02		21:54 9 05:39 (16)
2	08:53	08:19	07:18	08:00 (6)	07:00	05:48		04:57 05:29 (16)
	16:11	17:06	18:04	5 08:05 (6)	20:05	21:03		21:56 11 05:40 (16)
3	08:52	08:17	07:16	07:07	06:57	05:46		04:56 05:29 (16)
	16:13	17:08	18:06		20:07	21:05		21:57 13 05:42 (16)
4	08:52	08:15	07:13	06:55	05:44	04:55		04:55 05:29 (16)
	16:14	17:10	18:08		20:09	21:07		21:58 14 05:43 (16)
5	08:52	08:13	07:11	06:52	05:42	04:55		04:55 05:28 (16)
	16:15	17:12	18:10		20:11	21:09		21:59 15 05:43 (16)
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40		04:54 05:28 (16)
	16:17	17:14	18:12	3 07:36 (1)	20:13	21:11		22:00 16 05:44 (16)
7	08:51	08:09	07:06	07:30 (1)	06:47	05:38		04:53 05:27 (16)
	16:18	17:16	18:14	7 07:37 (1)	20:15	21:13		22:01 17 05:44 (16)
8	08:50	08:07	07:03	07:28 (1)	06:45	05:36		04:52 05:27 (16)
	16:19	17:18	18:16	10 07:38 (1)	20:17	21:15		22:02 17 05:44 (16)
9	08:50	08:05	07:01	07:25 (1)	06:42	05:34		04:52 05:27 (16)
	16:21	17:21	18:18	12 07:37 (1)	20:19	21:17		22:03 18 05:45 (16)
10	08:49	08:03	06:58	07:25 (1)	06:40	05:32	07:04 (2)	04:51 05:28 (16)
	16:22	17:23	18:20	12 07:37 (1)	20:21	21:19	2 07:06 (2)	22:04 18 05:46 (16)
11	08:48	08:01	06:56	07:25 (1)	06:37	05:30	07:02 (2)	04:51 05:27 (16)
	16:24	17:25	18:22	11 07:36 (1)	20:23	21:20	5 07:07 (2)	22:05 19 05:46 (16)
12	08:47	07:59	06:53	07:26 (1)	06:35	05:28	07:00 (2)	04:50 05:27 (16)
	16:26	17:27	18:24	9 07:35 (1)	20:25	21:22	7 07:07 (2)	22:06 20 05:47 (16)
13	08:46	07:57	06:51	07:28 (1)	06:33	05:26	06:57 (2)	04:50 05:28 (16)
	16:27	17:29	18:26	3 07:31 (1)	20:27	21:24	8 07:05 (2)	22:07 19 05:47 (16)
14	08:46	07:55	06:48		06:30	05:24	06:58 (2)	04:50 05:27 (16)
	16:29	17:31	18:28		20:29	21:26	6 07:04 (2)	22:07 20 05:47 (16)
15	08:45	07:53	06:46		06:28	05:23		04:49 05:27 (16)
	16:31	17:33	18:30		20:31	21:28		22:08 20 05:47 (16)
16	08:44	07:50	06:43		06:25	05:21		04:49 05:27 (16)
	16:33	17:35	18:32		20:33	21:29		22:09 21 05:48 (16)
17	08:42	07:48	06:41		06:23	05:19		04:49 05:27 (16)
	16:34	17:37	18:34		20:34	21:31		22:09 21 05:48 (16)
18	08:41	07:46	06:38		06:20	05:17		04:49 05:28 (16)
	16:36	17:39	18:36		20:36	21:33		22:10 20 05:48 (16)
19	08:40	07:44	06:36		06:18	05:16		04:49 05:28 (16)
	16:38	17:42	18:38		20:38	21:35		22:10 20 05:48 (16)
20	08:39	07:41	06:33	08:08 (6)	06:16	05:14		04:49 05:28 (16)
	16:40	17:44	18:40	2 08:10 (6)	20:40	21:36		22:10 21 05:49 (16)
21	08:38	07:39	06:31	08:05 (6)	06:13	05:13		04:49 05:29 (16)
	16:42	17:46	18:42	6 08:11 (6)	20:42	21:38		22:11 21 05:50 (16)
22	08:36	07:37	06:28	08:03 (6)	06:11	05:11		04:49 05:29 (16)
	16:44	17:48	18:44	9 08:12 (6)	20:44	21:40		22:11 21 05:50 (16)
23	08:35	07:35	06:25	08:00 (6)	06:09	05:10		04:49 05:29 (16)
	16:46	17:50	18:46	12 08:12 (6)	20:46	21:41		22:11 20 05:49 (16)
24	08:33	07:32	06:23	07:58 (6)	06:06	05:08		04:50 05:29 (16)
	16:48	17:52	18:48	4 06:51 (5)	20:48	21:43		22:11 20 05:49 (16)
25	08:32	07:30	06:20	06:44 (5)	06:04	05:07		04:50 05:30 (16)
	16:50	17:54	18:50	7 06:51 (5)	20:50	21:44		22:11 20 05:50 (16)
26	08:30	07:28	06:18	06:42 (5)	06:02	05:05		04:51 05:29 (16)
	16:52	17:56	18:52	10 06:52 (5)	20:52	21:46		22:11 21 05:50 (16)
27	08:29	07:25	06:15	06:39 (5)	05:59	05:04		04:51 05:30 (16)
	16:54	17:58	18:54	12 06:51 (5)	20:54	21:47		22:11 20 05:50 (16)
28	08:27	07:23	06:13	06:37 (5)	05:57	05:03		04:52 05:30 (16)
	16:56	18:00	18:56	14 06:51 (5)	20:56	21:49		22:11 20 05:50 (16)
29	08:26		07:10	07:36 (5)	05:55	05:02		04:52 05:31 (16)
	16:58		19:58	14 07:50 (5)	20:58	21:50		22:10 20 05:51 (16)
30	08:24		07:08	07:37 (5)	05:53	05:00		04:53 05:31 (16)
	17:00		20:00	12 07:49 (5)	21:00	21:52		22:10 20 05:51 (16)
31	08:22		07:05	07:38 (5)		04:59		05:32 (16)
	17:02		20:01	8 07:46 (5)		21:53	5 05:37 (16)	
Potential sun hours	244	270	366	422	499	517		
Total, worst case		108	164	28	5	552		
Sun reduction		0,24	0,34	0,39	0,52	0,48		
Oper. time red.		1,00	1,00	1,00	1,00	1,00		
Wind dir. red.		0,94	0,99	0,98	0,79	0,79		
Total reduction		0,23	0,34	0,39	0,42	0,39		
Total, real		25	56	11	2	216		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
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Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July		August		September		October		November		December	
1	04:54	05:31 (16)	05:36		06:33	07:01 (2)	07:29	08:06 (1)	07:30	08:27		
	22:10	05:50 (16)	21:32		20:23	07:06 (2)	19:07	08:13 (1)	16:53	16:06		
2	04:54	05:32 (16)	05:37		06:35	07:03 (2)	07:31	08:04 (1)	07:32	08:29		
	22:09	05:51 (16)	21:30		20:20	07:05 (2)	19:04	08:15 (1)	16:51	16:05		
3	04:55	05:32 (16)	05:39		06:36		07:32	08:03 (1)	07:34	08:30		
	22:09	05:51 (16)	21:29		20:18		19:01	08:15 (1)	16:49	16:05		
4	04:56	05:33 (16)	05:41		06:38		07:34	08:02 (1)	07:36	08:32		
	22:08	05:51 (16)	21:27		20:15		18:59	08:15 (1)	16:47	16:04		
5	04:57	05:34 (16)	05:43		06:40		07:36	08:04 (1)	07:38	08:34		
	22:08	05:51 (16)	21:25		20:13		18:56	08:15 (1)	16:45	16:03		
6	04:58	05:33 (16)	05:45		06:42		07:38	08:06 (1)	07:40	08:35		
	22:07	05:50 (16)	21:23		20:10		18:54	08:14 (1)	16:43	16:03		
7	04:59	05:34 (16)	05:46		06:44		07:40	08:08 (1)	07:42	08:36		
	22:06	05:50 (16)	21:21		20:08		18:51	08:13 (1)	16:41	16:02		
8	05:00	05:35 (16)	05:48		06:46		07:42	08:10 (1)	07:44	08:38		
	22:06	05:49 (16)	21:18		20:05		18:49	08:11 (1)	16:39	16:02		
9	05:01	05:35 (16)	05:50		06:48		07:44		07:46	08:39		
	22:05	05:49 (16)	21:16		20:03		18:46		16:37	16:01		
10	05:02	05:36 (16)	05:52		06:49		07:46		07:48	08:40		
	22:04	05:48 (16)	21:14		20:00		18:44		16:35	16:01		
11	05:03	05:38 (16)	05:54		06:51		07:48		07:50	08:41		
	22:03	05:48 (16)	21:12		19:58		18:41		16:34	16:01		
12	05:05	05:40 (16)	05:55		06:53	07:30 (5)	07:50	08:33 (6)	07:52	08:43		
	22:02	05:47 (16)	21:10		19:55	07:38 (5)	18:39	08:41 (6)	16:32	16:00		
13	05:06		05:57		06:55	07:28 (5)	07:52	08:30 (6)	07:54	08:44		
	22:01		21:08		19:53	07:40 (5)	18:37	08:43 (6)	16:30	16:00		
14	05:07		05:59		06:57	07:26 (5)	07:54	08:29 (6)	07:56	08:45		
	22:00		21:06		19:50	07:40 (5)	18:34	08:44 (6)	16:28	16:00		
15	05:09		06:01		06:59	07:26 (5)	07:56	08:28 (6)	07:58	08:46		
	21:59		21:03		19:47	07:40 (5)	18:32	08:44 (6)	16:27	16:00		
16	05:10		06:03		07:01	07:28 (5)	07:58	08:27 (6)	08:00	08:47		
	21:58		21:01		19:45	07:40 (5)	18:29	08:44 (6)	16:25	16:00		
17	05:11		06:05		07:02	07:30 (5)	08:00	08:28 (6)	08:02	08:47		
	21:56		20:59		19:42	07:40 (5)	18:27	08:44 (6)	16:23	16:00		
18	05:13		06:07		07:04	07:32 (5)	08:02	08:30 (6)	08:04	08:48		
	21:55		20:57		19:40	07:39 (5)	18:25	08:44 (6)	16:22	16:00		
19	05:14		06:08		07:06	07:33 (5)	08:04	08:32 (6)	08:06	08:49		
	21:54		20:54		19:37	07:37 (5)	18:22	08:43 (6)	16:20	16:01		
20	05:16		06:10		07:08	07:35 (5)	08:06	08:34 (6)	08:08	08:50		
	21:52		20:52		19:35	07:36 (5)	18:20	08:42 (6)	16:19	16:01		
21	05:17		06:12		07:10		08:08	08:36 (6)	08:10	08:50		
	21:51		20:50		19:32		18:18	08:41 (6)	16:18	16:01		
22	05:19		06:14		07:12		08:10	08:39 (6)	08:12	08:51		
	21:49		20:47		19:30		18:15	08:40 (6)	16:16	16:02		
23	05:20		06:16		07:14		08:12		08:13	08:51		
	21:48		20:45		19:27		18:13		16:15	16:02		
24	05:22		06:18		07:16		08:14		08:15	08:52		
	21:46		20:42		19:24		18:11		16:14	16:03		
25	05:24		06:20		07:17		07:16		08:17	08:52		
	21:45		20:40		19:22		17:08		16:12	16:04		
26	05:25		06:22		07:19		07:18		08:19	08:52		
	21:43		20:38		19:19		17:06		16:11	16:04		
27	05:27		06:23		07:21		07:20		08:21	08:53		
	21:41		20:35		19:17		17:04		16:10	16:05		
28	05:29		06:25		07:23		07:22		08:22	08:53		
	21:40		20:33		19:14		17:02		16:09	16:06		
29	05:30		06:27	06:58 (2)	07:25		07:24		08:24	08:53		
	21:38		20:30	07:05 (2)	19:12		17:00		16:08	16:07		
30	05:32		06:29	06:58 (2)	07:27		07:26		08:26	08:53		
	21:36		20:28	07:06 (2)	19:09		16:57		16:07	16:08		
31	05:34		06:31	06:59 (2)			07:28			08:53		
	21:34		20:25	07:06 (2)			16:55			16:09		
Potential sun hours	519		464		383		327		254	227		
Total, worst case	182		22		89		192					
Sun reduction	0,49		0,52		0,40		0,31					
Oper. time red.	1,00		1,00		1,00		1,00					
Wind dir. red.	0,79		0,98		1,00		0,95					
Total reduction	0,39		0,51		0,40		0,30					
Total, real	72		11		36		57					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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+370 37 407548
Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: F - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise and set times, and a summary section at the bottom for sun hours and reductions.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: G - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (7)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, shadow times, and reduction factors. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June										
1	08:53	08:20	07:20	17:11 (5)	07:02	18:49 (2)	05:50	20:00 (18)	04:58	20:39 (15)						
	16:10	17:04	18:02	21	17:32 (5)	20:03	29	19:18 (2)	21:01	25	20:25 (18)	21:54	30	21:09 (14)		
2	08:53	08:19	16:29 (1)	07:18	17:12 (5)	07:00	18:47 (2)	05:48	20:00 (18)	04:57	20:39 (15)					
	16:11	17:06	4	16:33 (6)	18:04	20	17:32 (5)	20:05	30	19:17 (2)	21:03	25	20:25 (18)	21:56	30	21:09 (14)
3	08:52	08:17	16:27 (1)	07:15	17:11 (5)	06:57	18:47 (2)	05:46	19:59 (18)	04:56	20:39 (15)					
	16:13	17:08	8	16:35 (6)	18:06	20	17:31 (5)	20:07	31	19:18 (2)	21:05	26	20:25 (18)	21:57	30	21:09 (14)
4	08:52	08:15	16:27 (1)	07:13	17:12 (5)	06:55	18:46 (2)	05:44	19:59 (18)	04:55	20:39 (15)					
	16:14	17:10	10	16:37 (6)	18:08	19	17:31 (5)	20:09	31	19:17 (2)	21:07	26	20:25 (18)	21:58	31	21:10 (14)
5	08:52	08:13	16:26 (1)	07:11	17:13 (5)	06:52	18:46 (2)	05:42	19:59 (18)	04:54	20:39 (15)					
	16:15	17:12	14	16:40 (6)	18:10	16	17:29 (5)	20:11	31	19:17 (2)	21:09	26	20:25 (18)	21:59	30	21:10 (14)
6	08:51	08:11	16:26 (1)	07:08	17:14 (5)	06:50	18:46 (2)	05:40	19:59 (18)	04:54	20:39 (15)					
	16:16	17:14	16	16:42 (6)	18:12	14	17:28 (5)	20:13	30	19:16 (2)	21:11	25	20:24 (18)	22:00	30	21:09 (14)
7	08:51	08:09	16:26 (1)	07:06	17:16 (5)	06:47	18:46 (2)	05:38	19:59 (18)	04:53	20:39 (15)					
	16:18	17:16	19	16:45 (6)	18:14	9	17:25 (5)	20:15	30	19:16 (2)	21:13	25	20:24 (18)	22:01	31	21:10 (14)
8	08:50	08:07	16:26 (1)	07:03		06:45	18:46 (2)	05:36	19:59 (18)	04:52	20:39 (15)					
	16:19	17:18	18	16:44 (6)	18:16		20:17	29	19:15 (2)	21:15	24	20:23 (18)	22:02	31	21:10 (14)	
9	08:49	08:05	16:27 (1)	07:01		06:42	18:47 (2)	05:34	20:00 (18)	04:52	20:40 (15)					
	16:21	17:20	17	16:44 (6)	18:18		20:19	27	19:14 (2)	21:17	22	20:22 (18)	22:03	30	21:10 (14)	
10	08:49	08:03	16:26 (1)	06:58		06:40	18:47 (2)	05:32	20:01 (18)	04:51	20:39 (15)					
	16:22	17:23	15	16:41 (6)	18:20		20:21	25	19:12 (2)	21:18	22	20:23 (18)	22:04	31	21:10 (14)	
11	08:48	08:01	16:27 (1)	06:56		06:37	18:48 (2)	05:30	20:02 (18)	04:51	20:40 (15)					
	16:24	17:25	13	16:40 (1)	18:22		20:23	23	19:11 (2)	21:20	19	20:21 (18)	22:05	30	21:10 (14)	
12	08:47	07:59	16:29 (1)	06:53		06:35	18:49 (2)	05:28	20:02 (18)	04:50	20:40 (15)					
	16:26	17:27	10	16:39 (1)	18:24		20:25	20	19:09 (2)	21:22	18	20:20 (18)	22:06	30	21:10 (14)	
13	08:46	07:57	16:31 (1)	06:51		06:32	18:51 (2)	05:26	20:03 (18)	04:50	20:41 (15)					
	16:27	17:29	7	16:38 (1)	18:26		20:27	16	19:07 (2)	21:24	16	20:19 (18)	22:07	30	21:11 (14)	
14	08:45	07:55		06:48		06:30	18:55 (2)	05:24	20:06 (18)	04:49	20:40 (15)					
	16:29	17:31		18:28		20:29	9	19:04 (2)	21:26	12	20:18 (18)	22:07	30	21:10 (14)		
15	08:44	07:52		06:46		06:28		05:22	20:08 (18)	04:49	20:40 (15)					
	16:31	17:33		18:30		20:30		21:28	7	20:15 (18)	22:08	30	21:10 (14)			
16	08:43	07:50		06:43		06:25		05:21		04:49	20:41 (15)					
	16:32	17:35		18:32		20:32		21:29		22:08	30	21:11 (14)				
17	08:42	07:48		06:41		06:23		05:19		04:49	20:41 (15)					
	16:34	17:37		18:34		20:34		21:31		22:09	30	21:11 (14)				
18	08:41	07:46		06:38		06:20		05:17		04:49	20:41 (15)					
	16:36	17:39		18:36		20:36		21:33		22:09	30	21:11 (14)				
19	08:40	07:44		06:35		06:18		05:16		20:53 (14)	04:49	20:41 (15)				
	16:38	17:41		18:38		20:38		21:34	7	21:00 (14)	22:10	30	21:11 (14)			
20	08:39	07:41		06:33		06:15		05:14		20:51 (14)	04:49	20:41 (15)				
	16:40	17:43		18:40		20:40		21:36	11	21:02 (14)	22:10	30	21:11 (14)			
21	08:37	07:39		06:30		06:13		05:12		20:47 (15)	04:49	20:41 (15)				
	16:42	17:46		18:42		20:42		21:38	16	21:03 (14)	22:10	30	21:11 (14)			
22	08:36	07:37		06:28		06:11		05:11		20:45 (15)	04:49	20:42 (15)				
	16:44	17:48		18:44		20:44		21:39	19	21:04 (14)	22:11	30	21:12 (14)			
23	08:35	07:34	17:18 (5)	06:25		06:08		05:09		20:44 (15)	04:49	20:42 (15)				
	16:45	17:50	3	17:21 (5)	18:46		20:46	6	20:17 (17)	21:41	22	21:06 (14)	22:11	30	21:12 (14)	
24	08:33	07:32	17:16 (5)	06:23		06:06		05:08		20:42 (15)	04:50	20:42 (15)				
	16:47	17:52	7	17:23 (5)	18:48		20:48	10	20:19 (17)	21:43	24	21:06 (14)	22:11	30	21:12 (14)	
25	08:32	07:30	17:14 (5)	06:20		06:04		05:07		20:42 (15)	04:50	20:43 (15)				
	16:49	17:54	11	17:25 (5)	18:50		20:50	14	20:20 (17)	21:44	24	21:06 (14)	22:11	30	21:13 (14)	
26	08:30	07:27	17:13 (5)	06:18		06:02		05:05		20:41 (15)	04:50	20:43 (15)				
	16:51	17:56	15	17:28 (5)	18:52	10	18:00 (2)	06:02	17	20:22 (17)	21:46	26	21:07 (14)	22:11	30	21:13 (14)
27	08:29	07:25	17:12 (5)	06:15		05:59		05:04		20:03 (18)	05:04	20:41 (15)	04:51	20:44 (15)		
	16:53	17:58	17	17:29 (5)	18:54	16	18:12 (2)	20:54	20	20:23 (17)	21:47	27	21:08 (14)	22:11	29	21:13 (14)
28	08:27	07:23	17:12 (5)	06:13		05:57		05:03		20:02 (18)	05:03	20:40 (15)	04:51	20:43 (15)		
	16:55	18:00	20	17:32 (5)	18:56	20	18:14 (2)	20:56	22	20:24 (17)	21:49	28	21:08 (14)	22:11	30	21:13 (14)
29	08:25			07:10		05:55		05:01		20:01 (18)	05:01	20:40 (15)	04:52	20:44 (15)		
	16:57			19:57	23	19:15 (2)	20:58	24	20:25 (17)	21:50	28	21:08 (14)	22:10	30	21:14 (14)	
30	08:24			07:07		05:53		05:00		20:01 (18)	05:00	20:40 (15)	04:53	20:43 (15)		
	17:00			19:59	26	19:17 (2)	21:00	24	20:25 (18)	21:52	29	21:09 (14)	22:10	31	21:14 (14)	
31	08:22			07:05		05:49		04:59		20:39 (15)						
	17:02			20:01	28	19:17 (2)		21:53	30	21:09 (14)						
Potential sun hours	244	270		366		422		499		517						
Total, worst case			224		242		498		609		904					
Sun reduction			0,24		0,34		0,39		0,52		0,48					
Oper. time red.			1,00		1,00		1,00		1,00		1,00					
Wind dir. red.			0,85		0,96		0,99		0,92		0,87					
Total reduction			0,21		0,33		0,39		0,47		0,42					
Total, real			46		79		193		289		382					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: H - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (July to December) and rows for days (1 to 31). Each cell contains a matrix of times and values. Summary rows at the bottom show 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: I - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, shadow times, and reduction factors. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March		April	May	June	
1	08:53	08:20	07:20		07:03	05:51	04:58	
	16:10	17:04	18:02		20:03	21:02	21:54	
2	08:53	08:19	07:18		07:00	05:48	04:57	
	16:11	17:06	18:04		20:05	21:04	21:56	
3	08:52	08:17	07:16		06:58	05:46	04:56	
	16:13	17:08	18:06		20:07	21:05	21:57	
4	08:52	08:15	07:13		06:55	05:44	04:55	
	16:14	17:10	18:08		20:09	21:07	21:58	
5	08:52	08:13	07:11	07:36 (6)	06:52	05:42	04:55	
	16:15	17:12	18:10	1	07:37 (6)	20:11	21:09	21:59
6	08:51	08:11	07:08	07:33 (6)	06:50	05:40	04:54	
	16:17	17:14	18:12	4	07:37 (6)	20:13	21:11	22:00
7	08:51	08:09	07:06	07:31 (6)	06:47	05:38	04:53	
	16:18	17:16	18:14	7	07:38 (6)	20:15	21:13	22:01
8	08:50	08:07	07:03	07:28 (6)	06:45	05:36	04:52	
	16:19	17:18	18:16	9	07:37 (6)	20:17	21:15	22:02
9	08:50	08:05	07:01	07:25 (6)	06:42	05:34	04:52	
	16:21	17:21	18:18	11	07:36 (6)	20:19	21:17	22:03
10	08:49	08:03	06:58	07:24 (6)	06:40	05:32	04:51	
	16:23	17:23	18:20	11	07:35 (6)	20:21	21:19	22:04
11	08:48	08:01	06:56	07:25 (6)	06:37	05:30	04:51	
	16:24	17:25	18:22	8	07:33 (6)	20:23	21:20	22:05
12	08:47	07:59	06:53		06:35	05:28	04:50	05:25 (15)
	16:26	17:27	18:24		20:25	21:22	22:06	4 05:29 (15)
13	08:46	07:57	06:51		06:33	05:26	04:50	05:24 (15)
	16:27	17:29	18:26		20:27	21:24	22:07	6 05:30 (15)
14	08:46	07:55	06:48		06:30	05:24	04:50	05:24 (15)
	16:29	17:31	18:28		20:29	21:26	22:07	8 05:32 (15)
15	08:45	07:53	06:46	07:10 (1)	06:28	05:23	04:49	05:23 (15)
	16:31	17:33	18:30	2	07:12 (1)	20:31	21:28	8 05:31 (15)
16	08:44	07:50	06:43	07:08 (1)	06:25	05:21	04:49	05:23 (15)
	16:33	17:35	18:32	5	07:13 (1)	20:33	21:29	9 05:32 (15)
17	08:42	07:48	06:41	07:05 (1)	06:23	05:19	04:49	05:23 (15)
	16:34	17:37	18:34	7	07:12 (1)	20:35	21:31	10 05:33 (15)
18	08:41	07:46	06:38	07:02 (1)	06:20	05:17	04:49	05:23 (15)
	16:36	17:39	18:36	9	07:11 (1)	20:36	21:33	10 05:33 (15)
19	08:40	07:44	06:36	07:04 (1)	06:18	05:16	04:49	05:23 (15)
	16:38	17:42	18:38	5	07:09 (1)	20:38	21:35	10 05:33 (15)
20	08:39	07:42	06:33		06:16	05:14	04:49	05:23 (15)
	16:40	17:44	18:40		20:40	21:36	22:10	11 05:34 (15)
21	08:38	07:39	06:31		06:13	05:13	04:49	05:24 (15)
	16:42	17:46	18:42		20:42	21:38	22:11	11 05:35 (15)
22	08:36	07:37	06:28		06:11	05:11	04:49	05:24 (15)
	16:44	17:48	18:44		20:44	21:40	22:11	11 05:35 (15)
23	08:35	07:35	06:25		06:09	05:10	04:49	05:24 (15)
	16:46	17:50	18:46		20:46	21:41	22:11	10 05:34 (15)
24	08:33	07:32	06:23		06:06	05:08	04:50	05:25 (15)
	16:48	17:52	18:48		20:48	21:43	22:11	10 05:35 (15)
25	08:32	07:30	06:20		06:04	05:07	04:50	05:25 (15)
	16:50	17:54	18:50		20:50	21:44	22:11	10 05:35 (15)
26	08:30	07:28	06:18		06:02	05:05	04:51	05:25 (15)
	16:52	17:56	18:52		20:52	21:46	22:11	9 05:34 (15)
27	08:29	07:25	06:15		05:59	05:04	04:51	05:26 (15)
	16:54	17:58	18:54		20:54	21:47	22:11	9 05:35 (15)
28	08:27	07:23	06:13		05:57	05:03	04:52	05:26 (15)
	16:56	18:00	18:56		20:56	21:49	22:11	8 05:34 (15)
29	08:26		07:10		05:55	05:02	04:52	05:27 (15)
	16:58		19:58		20:58	21:50	22:10	7 05:34 (15)
30	08:24		07:08		05:53	05:00	04:53	05:29 (15)
	17:00		20:00		21:00	21:52	22:10	5 05:34 (15)
31	08:22		07:05			04:59		
	17:02		20:01			21:53		
Potential sun hours	244	270	366		422	499	517	
Total, worst case				79				166
Sun reduction				0,34				0,48
Oper. time red.				1,00				1,00
Wind dir. red.				0,98				0,77
Total reduction				0,34				0,38
Total, real				27				63

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	July	August	September	October	November	December
1	04:54	05:30 (15)	05:36	06:33	07:29	07:30
	22:10	05:31 (15)	21:32	20:23	19:07	16:53
2	04:54		05:37	06:35	07:31	08:06 (6)
	22:09		21:30	20:20	19:04	16:51 (6)
3	04:55		05:39	06:36	07:33	08:03 (6)
	22:09		21:29	20:18	19:01	16:49 (6)
4	04:56		05:41	06:38	07:34	08:02 (6)
	22:08		21:27	20:15	18:59	16:47 (6)
5	04:57		05:43	06:40	07:36	08:04 (6)
	22:08		21:25	20:13	18:56	16:45 (6)
6	04:58		05:45	06:42	07:38	08:06 (6)
	22:07		21:23	20:10	18:54	16:43 (6)
7	04:59		05:46	06:44	07:40	08:08 (6)
	22:06		21:21	20:08	18:51	16:41 (6)
8	05:00		05:48	06:46	07:42	08:10 (6)
	22:06		21:18	20:05	18:49	16:39 (6)
9	05:01		05:50	06:48	07:44	08:11 (6)
	22:05		21:16	20:03	18:46	16:37 (6)
10	05:02		05:52	06:50	07:46	08:12 (6)
	22:04		21:14	20:00	18:44	16:35 (6)
11	05:03		05:54	06:51	07:48	08:13 (6)
	22:03		21:12	19:58	18:42	16:34 (6)
12	05:05		05:56	06:53	07:50	08:14 (6)
	22:02		21:10	19:55	18:39	16:32 (6)
13	05:06		05:57	06:55	07:52	08:15 (6)
	22:01		21:08	19:53	18:37	16:30 (6)
14	05:07		05:59	06:57	07:54	08:16 (6)
	22:00		21:06	19:50	18:34	16:28 (6)
15	05:09		06:01	06:59	07:56	08:17 (6)
	21:59		21:03	19:47	18:32	16:27 (6)
16	05:10		06:03	07:01	07:58	08:18 (6)
	21:58		21:01	19:45	18:29	16:25 (6)
17	05:11		06:05	07:02	08:00	08:19 (6)
	21:56		20:59	19:42	18:27	16:24 (6)
18	05:13		06:07	07:04	08:02	08:20 (6)
	21:55		20:57	19:40	18:25	16:22 (6)
19	05:14		06:09	07:06	08:04	08:21 (6)
	21:54		20:54	19:37	18:22	16:20 (6)
20	05:16		06:10	07:08	08:06	08:22 (6)
	21:52		20:52	19:35	18:20	16:19 (6)
21	05:17		06:12	07:10	08:08	08:23 (6)
	21:51		20:50	19:32	18:18	16:18 (6)
22	05:19		06:14	07:12	08:10	08:24 (6)
	21:49		20:47	19:30	18:15	16:16 (6)
23	05:20		06:16	07:14	08:12	08:25 (6)
	21:48		20:45	19:27	18:13	16:15 (6)
24	05:22		06:18	07:16	08:14	08:26 (6)
	21:46		20:42	19:24	18:11	16:14 (6)
25	05:24		06:20	07:17	08:16	08:27 (6)
	21:45		20:40	19:22	17:08	16:12 (6)
26	05:25		06:22	07:19	08:17	08:28 (6)
	21:43		20:38	19:19	17:06	16:11 (6)
27	05:27		06:23	07:21	08:18	08:29 (6)
	21:41		20:35	19:17	17:04	16:10 (6)
28	05:29		06:25	07:23	08:19	08:30 (6)
	21:40		20:33	19:14	17:02	16:09 (6)
29	05:30		06:27	07:25	08:20	08:31 (6)
	21:38		20:30	19:12	17:00	16:08 (6)
30	05:32		06:29	07:27	08:21	08:32 (6)
	21:36		20:28	19:09	16:57	16:07 (6)
31	05:34		06:31		08:22	08:33 (6)
	21:34		20:25		16:55	16:09 (6)
Potential sun hours	519	464	383	327	254	227
Total, worst case	1		29		53	
Sun reduction	0,49		0,40		0,31	
Oper. time red.	1,00		1,00		1,00	
Wind dir. red.	0,77		1,00		0,98	
Total reduction	0,38		0,40		0,31	
Total, real	0		12		16	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March		April	May	June			
1	08:53	08:20	07:20		07:03	05:51	04:58			
	16:10	17:04	18:02		20:03	21:02	21:54			
2	08:53	08:19	07:18		07:00	05:48	04:57			
	16:11	17:06	18:04		20:05	21:04	21:56			
3	08:52	08:17	07:16		06:58	05:46	04:56			
	16:13	17:08	18:06		20:07	21:05	21:57			
4	08:52	08:15	07:13		06:55	05:44	04:55			
	16:14	17:10	18:08		20:09	21:07	21:58			
5	08:52	08:13	07:11		06:52	05:42	04:55			
	16:15	17:12	18:10		20:11	21:09	21:59			
6	08:51	08:11	07:08		06:50	05:40	04:54			
	16:17	17:14	18:12		20:13	21:11	22:00			
7	08:51	08:09	07:06	07:31 (6)	06:47	05:38	04:53	05:26 (15)		
	16:18	17:16	18:14	2	07:33 (6)	20:15	21:13	22:01	5	05:31 (15)
8	08:50	08:07	07:03	07:28 (6)	06:45	05:36	04:52	05:26 (15)		
	16:19	17:18	18:16	5	07:33 (6)	20:17	21:15	22:02	7	05:33 (15)
9	08:50	08:05	07:01	07:25 (6)	06:42	05:34	04:52	05:25 (15)		
	16:21	17:21	18:18	7	07:32 (6)	20:19	21:17	22:03	9	05:34 (15)
10	08:49	08:03	06:58	07:23 (6)	06:40	05:32	04:51	05:25 (15)		
	16:23	17:23	18:20	9	07:32 (6)	20:21	21:19	22:04	10	05:35 (15)
11	08:48	08:01	06:56	07:20 (6)	06:37	05:30	04:51	05:24 (15)		
	16:24	17:25	18:22	11	07:31 (6)	20:23	21:20	22:05	11	05:35 (15)
12	08:47	07:59	06:53	07:21 (6)	06:35	05:28	04:50	05:24 (15)		
	16:26	17:27	18:24	9	07:30 (6)	20:25	21:22	22:06	12	05:36 (15)
13	08:46	07:57	06:51	07:24 (6)	06:33	05:26	04:50	05:24 (15)		
	16:27	17:29	18:26	1	07:25 (6)	20:27	21:24	22:07	13	05:37 (15)
14	08:46	07:55	06:48		06:30	05:24	04:50	05:24 (15)		
	16:29	17:31	18:28		20:29	21:26	22:07	13	05:37 (15)	
15	08:45	07:53	06:46		06:28	05:23	04:49	05:23 (15)		
	16:31	17:33	18:30		20:31	21:28	22:08	14	05:37 (15)	
16	08:44	07:50	06:43	07:08 (1)	06:25	05:21	04:49	05:23 (15)		
	16:33	17:35	18:32	1	07:09 (1)	20:33	21:29	22:09	14	05:37 (15)
17	08:42	07:48	06:41	07:05 (1)	06:23	05:19	04:49	05:23 (15)		
	16:34	17:37	18:34	4	07:09 (1)	20:35	21:31	22:09	15	05:38 (15)
18	08:41	07:46	06:38	07:02 (1)	06:20	05:17	04:49	05:23 (15)		
	16:36	17:39	18:36	6	07:08 (1)	20:36	21:33	22:10	15	05:38 (15)
19	08:40	07:44	06:36	07:00 (1)	06:18	05:16	04:49	05:23 (15)		
	16:38	17:42	18:38	8	07:08 (1)	20:38	21:35	22:10	15	05:38 (15)
20	08:39	07:42	06:33	07:00 (1)	06:16	05:14	04:49	05:23 (15)		
	16:40	17:44	18:40	5	07:05 (1)	20:40	21:36	22:10	15	05:38 (15)
21	08:38	07:39	06:31		06:13	05:13	04:49	05:24 (15)		
	16:42	17:46	18:42		20:42	21:38	22:11	15	05:39 (15)	
22	08:36	07:37	06:28		06:11	05:11	04:49	05:24 (15)		
	16:44	17:48	18:44		20:44	21:40	22:11	15	05:39 (15)	
23	08:35	07:35	06:25		06:09	05:10	04:50	05:24 (15)		
	16:46	17:50	18:46		20:46	21:41	22:11	15	05:39 (15)	
24	08:33	07:32	06:23		06:06	05:08	04:50	05:25 (15)		
	16:48	17:52	18:48		20:48	21:43	22:11	15	05:40 (15)	
25	08:32	07:30	06:20		06:04	05:07	04:50	05:25 (15)		
	16:50	17:54	18:50		20:50	21:44	22:11	15	05:40 (15)	
26	08:30	07:28	06:18		06:02	05:05	04:51	05:25 (15)		
	16:52	17:56	18:52		20:52	21:46	22:11	14	05:39 (15)	
27	08:29	07:25	06:15		05:59	05:04	04:51	05:26 (15)		
	16:54	17:58	18:54		20:54	21:47	22:11	14	05:40 (15)	
28	08:27	07:23	06:13		05:57	05:03	04:52	05:26 (15)		
	16:56	18:00	18:56		20:56	21:49	22:11	13	05:39 (15)	
29	08:26		07:10		05:55	05:02	04:52	05:27 (15)		
	16:58		19:58		20:58	21:50	22:10	13	05:40 (15)	
30	08:24		07:08		05:53	05:00	04:53	05:28 (15)		
	17:00		20:00		21:00	21:52	22:10	12	05:40 (15)	
31	08:22		07:05			04:59				
	17:02		20:01			21:53				
Potential sun hours	244	270	366		422	499	517			
Total, worst case				68				309		
Sun reduction				0,34				0,48		
Oper. time red.				1,00				1,00		
Wind dir. red.				0,99				0,77		
Total reduction				0,34				0,38		
Total, real				23				118		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:28 (15)	05:36	06:33	07:29	08:01 (6)	07:30	08:27
	22:10	05:39 (15)	21:32	20:23	19:07	7 08:08 (6)	16:53	16:06
2	04:54	05:29 (15)	05:37	06:35	07:31	07:59 (6)	07:32	08:29
	22:09	10 05:39 (15)	21:30	20:20	19:04	10 08:09 (6)	16:51	16:05
3	04:55	05:30 (15)	05:39	06:37	07:33	08:00 (6)	07:34	08:31
	22:09	9 05:39 (15)	21:29	20:18	19:01	10 08:10 (6)	16:49	16:05
4	04:56	05:31 (15)	05:41	06:38	07:34	08:02 (6)	07:36	08:32
	22:08	8 05:39 (15)	21:27	20:15	18:59	8 08:10 (6)	16:47	16:04
5	04:57	05:32 (15)	05:43	06:40	07:36	08:04 (6)	07:38	08:34
	22:08	6 05:38 (15)	21:25	20:13	18:56	6 08:10 (6)	16:45	16:03
6	04:58	05:32 (15)	05:45	06:42	07:38	08:06 (6)	07:40	08:35
	22:07	4 05:36 (15)	21:23	20:10	18:54	3 08:09 (6)	16:43	16:03
7	04:59		05:46	06:44	07:40		07:42	08:36
	22:06		21:21	20:08	18:51		16:41	16:02
8	05:00		05:48	06:46	07:42		07:44	08:38
	22:06		21:18	20:05	18:49		16:39	16:02
9	05:01		05:50	06:48	07:44		07:46	08:39
	22:05		21:16	20:03	18:46		16:37	16:01
10	05:02		05:52	06:50	07:46		07:48	08:40
	22:04		21:14	20:00	18:44		16:35	16:01
11	05:03		05:54	06:51	07:48		07:50	08:41
	22:03		21:12	19:58	18:42		16:34	16:01
12	05:05		05:56	06:53	07:50		07:52	08:43
	22:02		21:10	19:55	18:39		16:32	16:00
13	05:06		05:57	06:55	07:52		07:54	08:44
	22:01		21:08	19:53	18:37		16:30	16:00
14	05:07		05:59	06:57	07:54		07:56	08:45
	22:00		21:06	19:50	18:34		16:28	16:00
15	05:09		06:01	06:59	07:56		07:58	08:46
	21:59		21:03	19:48	18:32		16:27	16:00
16	05:10		06:03	07:01	07:58		08:00	08:47
	21:58		21:01	19:45	18:29		16:25	16:00
17	05:11		06:05	07:02	08:00		08:02	08:48
	21:56		20:59	19:42	18:27		16:24	16:00
18	05:13		06:07	07:04	08:02		08:04	08:48
	21:55		20:57	19:40	18:25		16:22	16:00
19	05:14		06:09	07:06	08:04		08:06	08:49
	21:54		20:54	19:37	18:22		16:20	16:01
20	05:16		06:10	07:08	08:06		08:08	08:50
	21:52		20:52	19:35	18:20		16:19	16:01
21	05:17		06:12	07:10	08:08		08:10	08:50
	21:51		20:50	19:32	18:18		16:18	16:01
22	05:19		06:14	07:12	08:10		08:12	08:51
	21:49		20:47	19:30	18:15		16:16	16:02
23	05:20		06:16	07:14	08:12		08:13	08:51
	21:48		20:45	19:27	3 07:49 (1)	18:13	16:15	16:02
24	05:22		06:18	07:16	08:14		08:15	08:52
	21:46		20:42	19:24	8 07:51 (1)	18:11	16:14	16:03
25	05:24		06:20	07:17	08:16		08:17	08:52
	21:45		20:40	19:22	7 07:52 (1)	17:08	16:12	16:04
26	05:25		06:22	07:19	08:18		08:19	08:52
	21:43		20:38	19:19	5 07:51 (1)	17:06	16:11	16:04
27	05:27		06:23	07:21	08:20		08:21	08:53
	21:41		20:35	19:17	2 07:50 (1)	17:04	16:10	16:05
28	05:29		06:25	07:23	08:22		08:22	08:53
	21:40		20:33	19:14	17:02		16:09	16:06
29	05:30		06:27	07:25	08:24		08:24	08:53
	21:38		20:30	19:12	17:00		16:08	16:07
30	05:32		06:29	07:27	08:26		08:26	08:53
	21:36		20:28	19:09	16:57		16:07	16:08
31	05:34		06:31		08:28			08:53
	21:34		20:25		16:55		16:09	16:09
Potential sun hours	519	464	383	327		254		227
Total, worst case	48			25		44		
Sun reduction	0,49			0,40		0,31		
Oper. time red.	1,00			1,00		1,00		
Wind dir. red.	0,77			1,00		0,98		
Total reduction	0,38			0,40		0,31		
Total, real	18			10		13		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March		April	May	June	
1	08:53	08:20	07:20		07:03	05:51	04:58	
	16:10	17:04	18:02		20:03	21:02	21:54	
2	08:53	08:19	07:18		07:00	05:48	04:57	
	16:11	17:06	18:04		20:05	21:04	21:56	
3	08:52	08:17	07:16		06:58	05:46	04:56	
	16:13	17:08	18:06		20:07	21:05	21:57	
4	08:52	08:15	07:13		06:55	05:44	04:55	
	16:14	17:10	18:08		20:09	21:07	21:58	
5	08:52	08:13	07:11		06:52	05:42	04:55	
	16:15	17:12	18:10		20:11	21:09	21:59	
6	08:51	08:11	07:08		06:50	05:40	04:54	
	16:17	17:14	18:12		20:13	21:11	22:00	
7	08:51	08:09	07:06		06:47	05:38	04:53	
	16:18	17:16	18:14		20:15	21:13	22:01	
8	08:50	08:07	07:03		06:45	05:36	04:52	05:30 (18)
	16:19	17:18	18:16		20:17	21:15	22:02	1 05:31 (18)
9	08:50	08:05	07:01	07:25 (6)	06:42	05:34	04:52	05:27 (18)
	16:21	17:21	18:18	3 07:28 (6)	20:19	21:17	22:03	6 05:33 (18)
10	08:49	08:03	06:58	07:23 (6)	06:40	05:32	04:51	05:26 (18)
	16:23	17:23	18:20	5 07:28 (6)	20:21	21:19	22:04	9 05:35 (18)
11	08:48	08:01	06:56	07:20 (6)	06:37	05:30	04:51	05:25 (18)
	16:24	17:25	18:22	8 07:28 (6)	20:23	21:20	22:05	10 05:35 (18)
12	08:47	07:59	06:53	07:18 (6)	06:35	05:28	04:50	05:25 (18)
	16:26	17:27	18:24	9 07:27 (6)	20:25	21:22	22:06	12 05:37 (18)
13	08:46	07:57	06:51	07:17 (6)	06:33	05:26	04:50	05:25 (18)
	16:27	17:29	18:26	8 07:25 (6)	20:27	21:24	22:07	12 05:37 (18)
14	08:46	07:55	06:48	07:20 (6)	06:30	05:24	04:50	05:25 (18)
	16:29	17:31	18:28	3 07:23 (6)	20:29	21:26	22:07	13 05:38 (18)
15	08:45	07:53	06:46		06:28	05:23	04:49	05:24 (18)
	16:31	17:33	18:30		20:31	21:28	22:08	14 05:38 (18)
16	08:44	07:50	06:43		06:25	05:21	04:49	05:24 (18)
	16:33	17:35	18:32		20:33	21:29	22:09	15 05:39 (18)
17	08:42	07:48	06:41		06:23	05:19	04:49	05:24 (18)
	16:34	17:37	18:34		20:35	21:31	22:09	15 05:39 (18)
18	08:41	07:46	06:38		06:20	05:17	04:49	05:24 (18)
	16:36	17:39	18:36		20:36	21:33	22:10	15 05:39 (18)
19	08:40	07:44	06:36		06:18	05:16	04:49	05:24 (18)
	16:38	17:42	18:38		20:38	21:35	22:10	16 05:40 (18)
20	08:39	07:42	06:33		06:16	05:14	04:49	05:24 (18)
	16:40	17:44	18:40		20:40	21:36	22:10	16 05:40 (18)
21	08:38	07:39	06:31		06:13	05:13	04:49	05:25 (18)
	16:42	17:46	18:42		20:42	21:38	22:11	16 05:41 (18)
22	08:36	07:37	06:28		06:11	05:11	04:49	05:25 (18)
	16:44	17:48	18:44		20:44	21:40	22:11	16 05:41 (18)
23	08:35	07:35	06:25		06:09	05:10	04:50	05:25 (18)
	16:46	17:50	18:46		20:46	21:41	22:11	16 05:41 (18)
24	08:33	07:32	06:23		06:06	05:08	04:50	05:26 (18)
	16:48	17:52	18:48		20:48	21:43	22:11	16 05:42 (18)
25	08:32	07:30	06:20		06:04	05:07	04:50	05:26 (18)
	16:50	17:54	18:50		20:50	21:44	22:11	15 05:41 (18)
26	08:30	07:28	06:18		06:02	05:05	04:51	05:26 (18)
	16:52	17:56	18:52		20:52	21:46	22:11	15 05:41 (18)
27	08:29	07:25	06:15		05:59	05:04	04:51	05:27 (18)
	16:54	17:58	18:54		20:54	21:47	22:11	14 05:41 (18)
28	08:27	07:23	06:13		05:57	05:03	04:52	05:27 (18)
	16:56	18:00	18:56		20:56	21:49	22:11	14 05:41 (18)
29	08:26		07:10		05:55	05:02	04:52	05:28 (18)
	16:58		19:58		20:58	21:50	22:10	13 05:41 (18)
30	08:24		07:08		05:53	05:00	04:53	05:29 (18)
	17:00		20:00		21:00	21:52	22:10	12 05:41 (18)
31	08:22		07:05			04:59		
	17:02		20:01			21:53		
Potential sun hours	244	270	366		422	499	517	
Total, worst case			36				301	
Sun reduction			0,34				0,48	
Oper. time red.			1,00				1,00	
Wind dir. red.			0,99				0,77	
Total reduction			0,34				0,38	
Total, real			12				114	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:29 (18)	05:36	06:33	07:29	07:56 (6)	07:30	08:27
	22:10	05:40 (18)	21:32	20:23	19:07	10 08:06 (6)	16:53	16:06
2	04:54	05:30 (18)	05:37	06:35	07:31	07:58 (6)	07:32	08:29
	22:09	10 05:40 (18)	21:30	20:20	19:04	8 08:06 (6)	16:51	16:05
3	04:55	05:31 (18)	05:39	06:37	07:33	08:00 (6)	07:34	08:31
	22:09	8 05:39 (18)	21:29	20:18	19:01	6 08:06 (6)	16:49	16:05
4	04:56	05:33 (18)	05:41	06:38	07:34	08:02 (6)	07:36	08:32
	22:08	5 05:38 (18)	21:27	20:15	18:59	4 08:06 (6)	16:47	16:04
5	04:57		05:43	06:40	07:36	08:04 (6)	07:38	08:34
	22:08		21:25	20:13	18:56	1 08:05 (6)	16:45	16:03
6	04:58		05:45	06:42	07:38		07:40	08:35
	22:07		21:23	20:10	18:54		16:43	16:03
7	04:59		05:46	06:44	07:40		07:42	08:36
	22:06		21:21	20:08	18:51		16:41	16:02
8	05:00		05:48	06:46	07:42		07:44	08:38
	22:06		21:18	20:05	18:49		16:39	16:02
9	05:01		05:50	06:48	07:44		07:46	08:39
	22:05		21:16	20:03	18:46		16:37	16:01
10	05:02		05:52	06:50	07:46		07:48	08:40
	22:04		21:14	20:00	18:44		16:35	16:01
11	05:03		05:54	06:51	07:48		07:50	08:41
	22:03		21:12	19:58	18:42		16:34	16:01
12	05:05		05:56	06:53	07:50		07:52	08:43
	22:02		21:10	19:55	18:39		16:32	16:00
13	05:06		05:57	06:55	07:52		07:54	08:44
	22:01		21:08	19:53	18:37		16:30	16:00
14	05:07		05:59	06:57	07:54		07:56	08:45
	22:00		21:06	19:50	18:34		16:28	16:00
15	05:09		06:01	06:59	07:56		07:58	08:46
	21:59		21:03	19:48	18:32		16:27	16:00
16	05:10		06:03	07:01	07:58		08:00	08:47
	21:58		21:01	19:45	18:29		16:25	16:00
17	05:11		06:05	07:02	08:00		08:02	08:48
	21:56		20:59	19:42	18:27		16:24	16:00
18	05:13		06:07	07:04	08:02		08:04	08:48
	21:55		20:57	19:40	18:25		16:22	16:00
19	05:14		06:09	07:06	08:04		08:06	08:49
	21:54		20:54	19:37	18:22		16:20	16:01
20	05:16		06:10	07:08	08:06		08:08	08:50
	21:52		20:52	19:35	18:20		16:19	16:01
21	05:17		06:12	07:10	08:08		08:10	08:50
	21:51		20:50	19:32	18:18		16:18	16:01
22	05:19		06:14	07:12	08:10		08:12	08:51
	21:49		20:47	19:30	18:15		16:16	16:02
23	05:20		06:16	07:14	08:12		08:13	08:51
	21:48		20:45	19:27	18:13		16:15	16:02
24	05:22		06:18	07:16	08:14		08:15	08:52
	21:46		20:42	19:24	18:11		16:14	16:03
25	05:24		06:20	07:17	07:16		08:17	08:52
	21:45		20:40	19:22	17:08		16:12	16:04
26	05:25		06:22	07:19	07:18		08:19	08:52
	21:43		20:38	19:19	17:06		16:11	16:04
27	05:27		06:23	07:21	07:20		08:21	08:53
	21:41		20:35	19:17	17:04		16:10	16:05
28	05:29		06:25	07:23	07:22		08:22	08:53
	21:40		20:33	19:14	17:02		16:09	16:06
29	05:30		06:27	07:25	07:24		08:24	08:53
	21:38		20:30	19:12	17:00		16:08	16:07
30	05:32		06:29	07:27	07:26	07:57 (6)	08:26	08:53
	21:36		20:28	19:09	7 08:04 (6)	16:57	16:07	16:08
31	05:34		06:31		07:28			08:53
	21:34		20:25		16:55		16:09	16:09
Potential sun hours	519	464	383	327		254	227	
Total, worst case	34		7		29			
Sun reduction	0,49		0,40		0,31			
Oper. time red.	1,00		1,00		1,00			
Wind dir. red.	0,77		0,99		0,99			
Total reduction	0,38		0,40		0,31			
Total, real	13		3		9			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

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Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70Shadow receptor: M - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:02 20:03	05:51 21:01	04:58 21:54	04:54 22:10	05:36 21:32	06:33 20:23	07:29 19:06	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51	08:29 16:05
3	08:52 16:13	08:17 17:08	07:15 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:28	06:36 20:18	07:32 19:01	07:34 16:49	08:30 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:26	06:38 20:15	07:34 18:59	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59	04:57 22:08	05:43 21:24	06:40 20:13	07:36 18:56	07:38 16:45	08:33 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:44 21:22	06:42 20:10	07:38 18:54	07:40 16:43	08:35 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:20	06:44 20:08	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	07:44 16:39	08:38 16:02
9	08:49 16:21	08:05 17:21	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:22	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:18	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:46 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:41	07:50 16:34	08:41 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:55 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:42 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:37	07:54 16:30	08:44 16:00
14	08:45 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07	05:07 22:00	05:59 21:05	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
15	08:44 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:08 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27	08:46 16:00
16	08:43 16:33	07:50 17:35	06:43 18:32	06:25 20:32	05:21 21:29	04:49 22:08	05:10 21:57	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:23	08:47 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:09	05:13 21:55	06:07 20:56	07:04 19:40	08:01 18:25	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:41	06:36 18:38	06:18 20:38	05:16 21:34	04:49 22:10	05:14 21:54	06:08 20:54	07:06 19:37	08:03 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:05 18:20	08:08 16:19	08:50 16:01
21	08:37 16:42	07:39 17:46	06:30 18:42	06:13 20:42	05:13 21:38	04:49 22:10	05:17 21:51	06:12 20:49	07:10 19:32	08:07 18:17	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:39	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:29	08:09 18:15	08:11 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:11 18:13	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:15 19:24	08:13 18:11	08:15 16:14	08:52 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 19:22	07:15 17:08	08:17 16:12	08:52 16:04
26	08:30 16:52	07:27 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11	05:25 21:43	06:22 20:38	07:19 19:19	07:17 17:06	08:19 16:11	08:52 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	07:20 17:04	08:20 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:39	06:25 20:33	07:23 19:14	07:22 17:02	08:22 16:09	08:53 16:06
29	08:25 16:58	07:20 19:58	06:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 19:12	07:24 16:59	08:24 16:08	08:53 16:07
30	08:24 17:00	07:19 19:59	06:09 21:00	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	07:26 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02	07:17 20:01	06:05 20:01	05:49 21:53	04:59 21:53	04:59 21:53	05:34 21:34	06:31 20:25	07:28 16:55	07:28 16:55	08:28 16:09	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

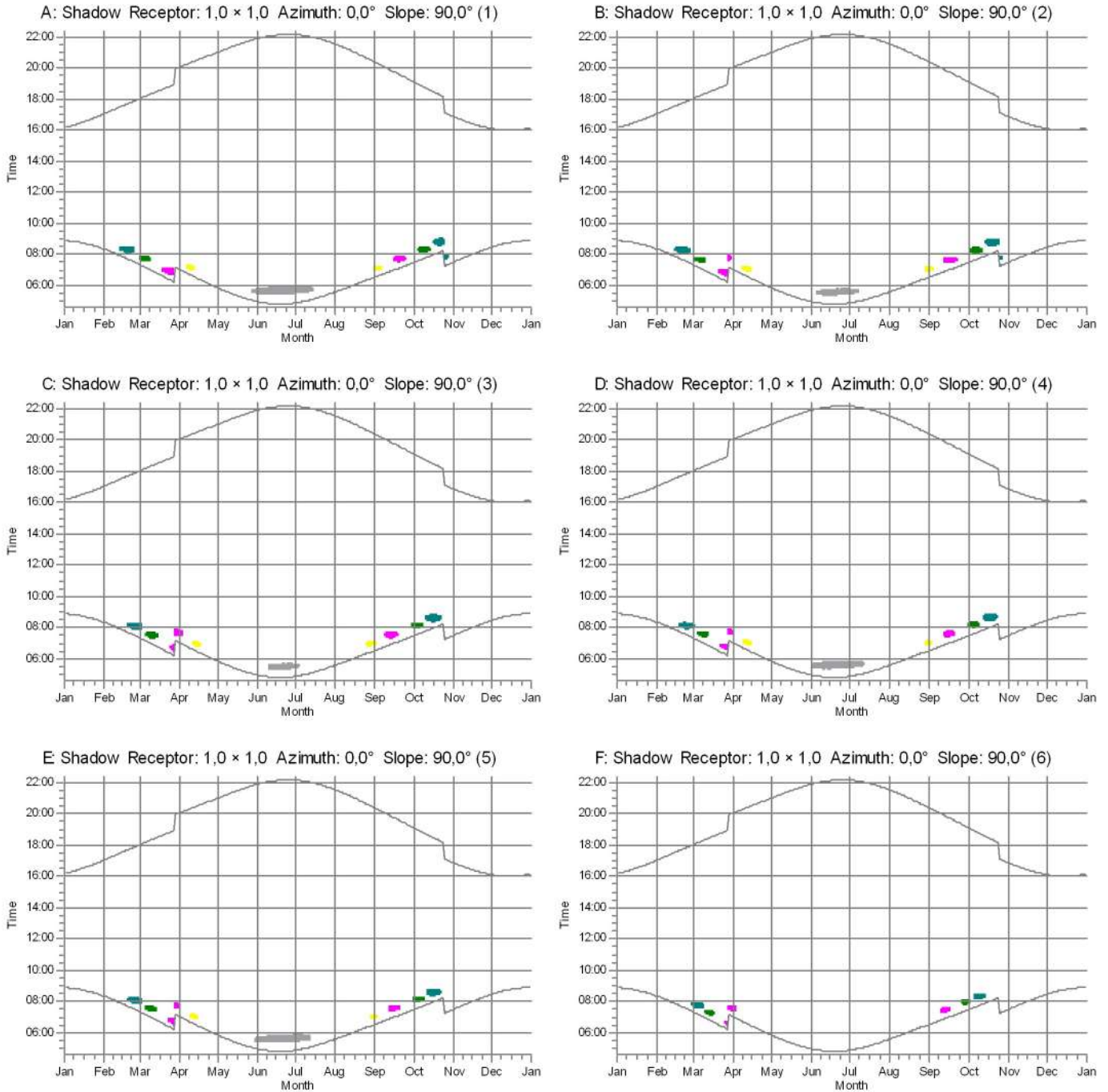
6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E70



WTGs

- 1: ENERCON E-70 E4 2000 71.0 IOI hub: 85,0 m (TOT: 120,5 m) (1)
- 2: ENERCON E-70 E4 2000 71.0 IOI hub: 85,0 m (TOT: 120,5 m) (2)
- 5: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)

- 6: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)
- 16: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (11)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

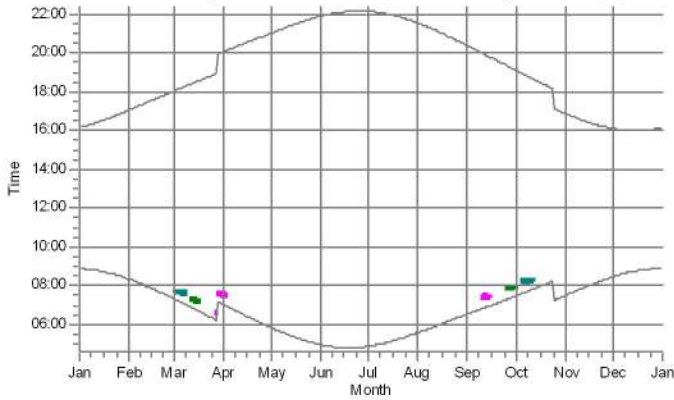
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Calculated:
2021.06.16 14:57/3.4.415

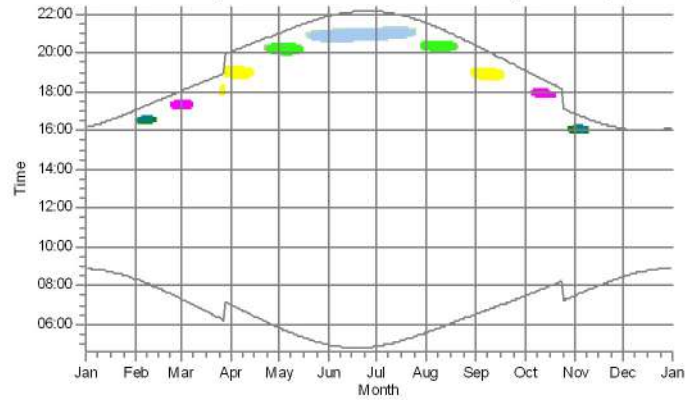
SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E70

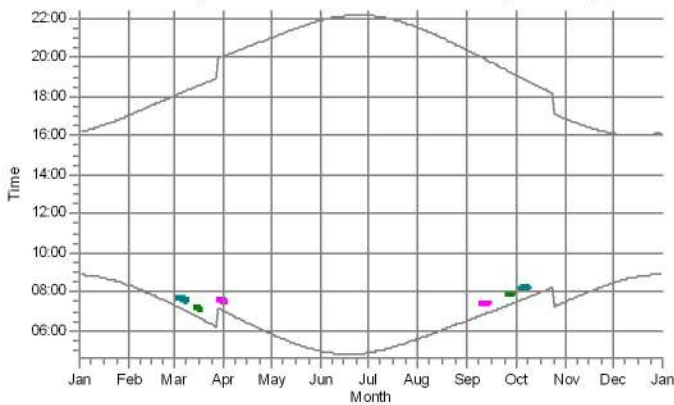
G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)



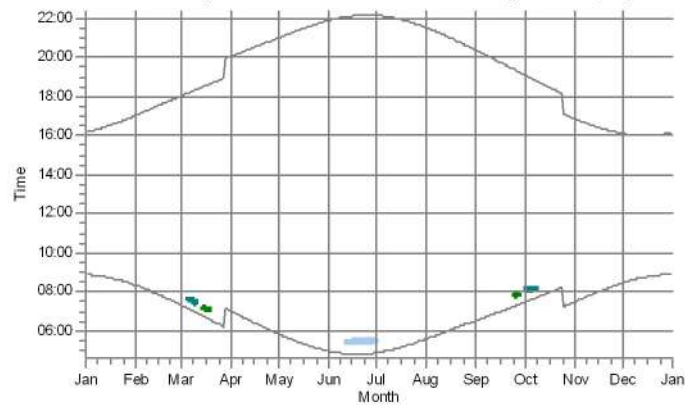
H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)



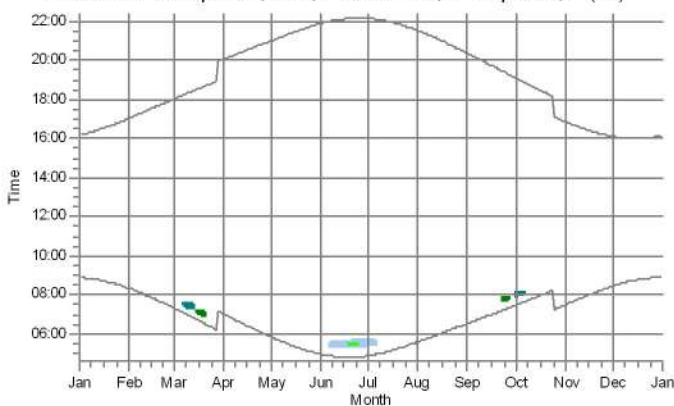
I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)



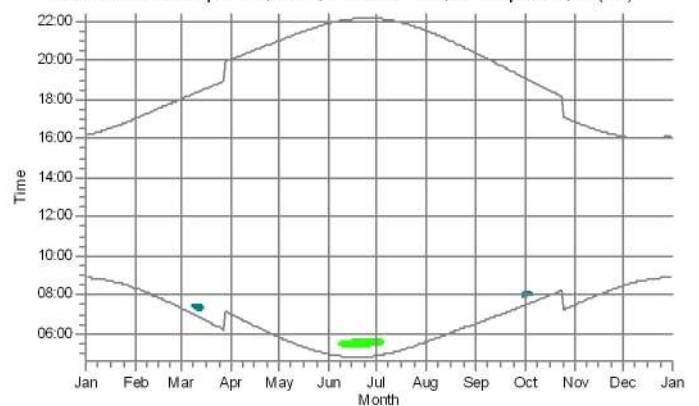
J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)



K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)



L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)



WTGs

- 1: ENERCON E-70 E4 2000 71.0 IOI hub: 85,0 m (TOT: 120,5 m) (1)
- 2: ENERCON E-70 E4 2000 71.0 IOI hub: 85,0 m (TOT: 120,5 m) (2)
- 5: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)

- 14: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (9)
- 15: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (10)
- 17: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (12)
- 18: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (13)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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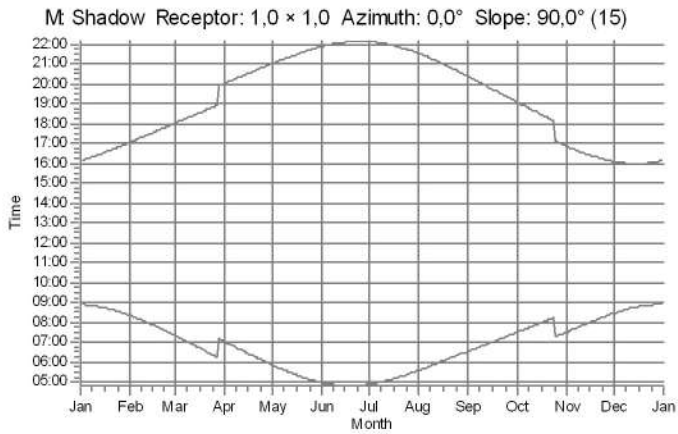
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Calculated:

2021.06.16 14:57/3.4.415

SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E70



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 1 - ENERCON E-70 E4 2000 71.0 IO! hub: 85,0 m (TOT: 120,5 m) (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and multiple rows for days, showing start and end times and potential sun hours.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 2 - ENERCON E-70 E4 2000 71.0 IO! hub: 85,0 m (TOT: 120,5 m) (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for time slots (08:53 to 17:02). Includes 'Potential sun hours' and 'Sum of minutes with flicker' at the bottom.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 3 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (7)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:22	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:23	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 4 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (8)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:30	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:02	16:09	16:06
29	08:25		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 5 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains sun rise and set times and a 'Sum' column at the bottom.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 6 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (10)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (e.g., 08:53 | 17:04) and a numerical value. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 7 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
2	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
3	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
4	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
5	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
6	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
7	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
8	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
9	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
10	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
11	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
12	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
13	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
14	16:18	17:16	18:14	20:15	21:13	22:01	22:07	21:21	20:08	18:51	16:41	16:02
15	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
16	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
17	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
18	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
19	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
20	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
21	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:42
22	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
23	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
24	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
25	08:47	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
26	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
27	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
28	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
29	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
30	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
31	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
32	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
33	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
34	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
35	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
36	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:24	16:22	16:00
37	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
38	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:00
39	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
40	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
41	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:08	08:10	08:50
42	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
43	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
44	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
45	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
46	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
47	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
48	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
49	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:16	08:17	08:52
50	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
51	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:18	08:19	08:53
52	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
53	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
54	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
55	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:22	08:22	08:53
56	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
57	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
58	16:57		19:58	20:58	21:50	22:11	21:38	20:30	19:12	18:00	16:08	16:07
59	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
60	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
61	08:22		07:05		04:59		05:34	06:31		07:28		08:53
62	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 8 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 18:02	07:02 20:03	05:50 21:02	04:58 21:54	04:53 22:10	05:35 21:32	06:33 20:23	07:29 19:06	07:30 16:53	08:27 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 19:04	07:32 16:51	08:29 16:05
3	08:52 16:12	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:29	06:36 20:18	07:32 19:01	07:34 16:49	08:31 16:04
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:27	06:38 20:15	07:34 18:59	07:36 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:54 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	07:38 16:45	08:34 16:03
6	08:51 16:16	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:44 21:23	06:42 20:10	07:38 18:54	07:40 16:43	08:35 16:02
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:21	06:44 20:08	07:40 18:51	07:42 16:41	08:36 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 18:49	07:44 16:39	08:38 16:01
9	08:50 16:21	08:05 17:20	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 18:46	07:46 16:37	08:39 16:01
10	08:49 16:22	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:19	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:46 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:50 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 18:41	07:50 16:33	08:41 16:00
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06	05:04 22:02	05:55 21:10	06:53 19:55	07:50 18:39	07:52 16:32	08:43 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:32 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 18:36	07:54 16:30	08:44 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:49 22:07	05:07 22:00	05:59 21:06	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:22 21:28	04:49 22:08	05:08 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27	08:46 16:00
16	08:44 16:32	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09	05:10 21:58	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:23	08:48 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10	05:13 21:55	06:06 20:56	07:04 19:40	08:02 18:24	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:41	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10	05:14 21:54	06:08 20:54	07:06 19:37	08:04 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:41 17:43	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:08 16:19	08:50 16:01
21	08:38 16:42	07:39 17:46	06:30 18:42	06:13 20:42	05:12 21:38	04:49 22:11	05:17 21:51	06:12 20:50	07:10 19:32	08:07 18:17	08:10 16:17	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:29	08:09 18:15	08:12 16:16	08:51 16:02
23	08:35 16:45	07:35 17:50	06:25 18:46	06:08 20:46	05:09 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:13 16:15	08:51 16:02
24	08:33 16:47	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:15 19:24	08:14 18:11	08:15 16:13	08:52 16:03
25	08:32 16:49	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:23 21:45	06:20 20:40	07:17 19:22	08:16 17:08	08:17 16:12	08:52 16:03
26	08:30 16:51	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:50 22:11	05:25 21:43	06:21 20:38	07:19 19:19	08:18 17:06	08:19 16:11	08:53 16:04
27	08:29 16:53	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 19:17	08:20 17:04	08:21 16:10	08:53 16:05
28	08:27 16:55	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:51 22:11	05:28 21:40	06:25 20:33	07:23 19:14	08:22 17:02	08:22 16:09	08:53 16:06
29	08:26 16:57	07:22 19:58	06:10 20:58	05:55 21:50	05:01 21:50	04:52 22:11	05:30 21:38	06:27 20:30	07:25 19:12	08:24 16:59	08:24 16:08	08:53 16:07
30	08:24 17:00	07:20 19:59	06:08 19:59	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 19:09	08:26 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02	07:18 20:01	06:05 20:01	05:59 21:00	05:04 21:53	04:59 22:10	05:34 21:34	06:31 20:25	07:28 16:55	08:27 16:55	08:28 16:09	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 9 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 10 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:14	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:16	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:04	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:18	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:02	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:20	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:00	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:22	08:24	08:53
	16:57		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:24	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 11 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise, Sun set, First time with flicker, Last time with flicker). Summary rows at the bottom show Potential sun hours and Sum of minutes with flicker for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 12 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:03	05:51	04:58	04:53	05:36	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:07	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:19	20:05	18:49	16:39	16:02
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:47	07:57	06:51	06:33	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:35	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:42	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:31	06:13	05:13	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:18	16:18	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:30	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:16	08:14	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	07:16	08:17	08:52
	16:50	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:22	07:19	07:18	08:19	08:53
	16:52	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:54	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	07:22	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:02	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:11	21:38	20:30	19:12	17:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		20:00	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 13 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:03	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:13	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:22	07:19	07:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:29	06:25	07:23	07:22	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		20:00	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 14 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day (1-31), showing sun rise and set times and minutes with flicker.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 15 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' at the bottom.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 16 - NORDEX N149/4.0-4.5 4500 149.0 !OI! hub: 165,0 m (TOT: 239,5 m) (11)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day (1-31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' at the bottom.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 17 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (TOT: 240,0 m) (12)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' at the bottom.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 14:57/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70WTG: 18 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (TOT: 240,0 m) (13)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

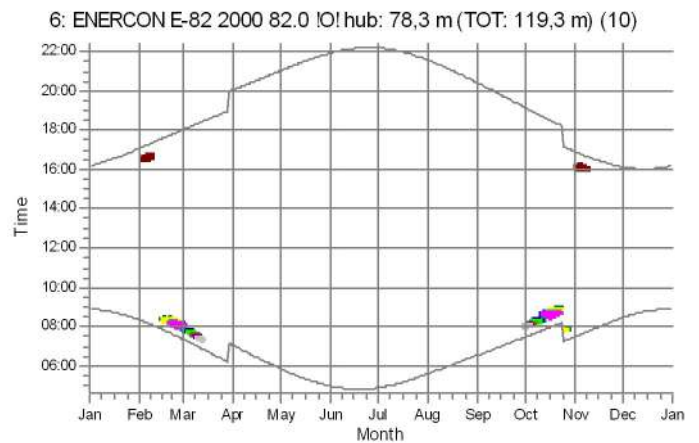
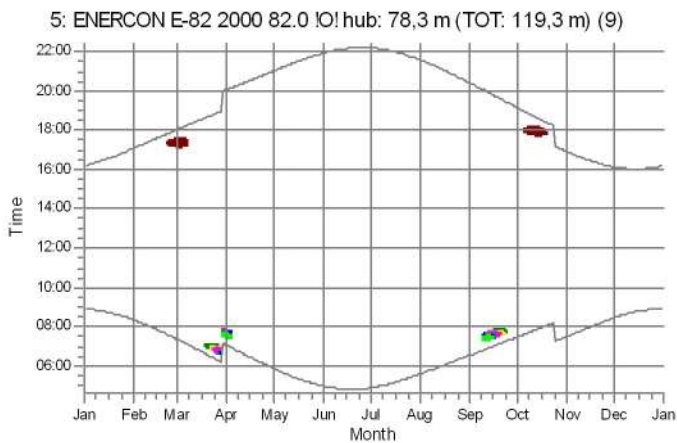
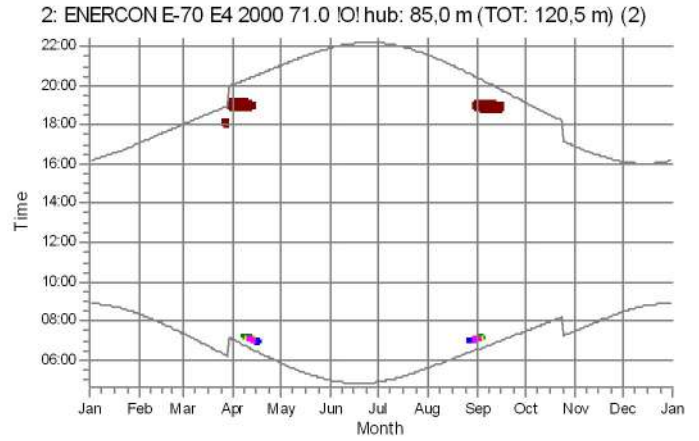
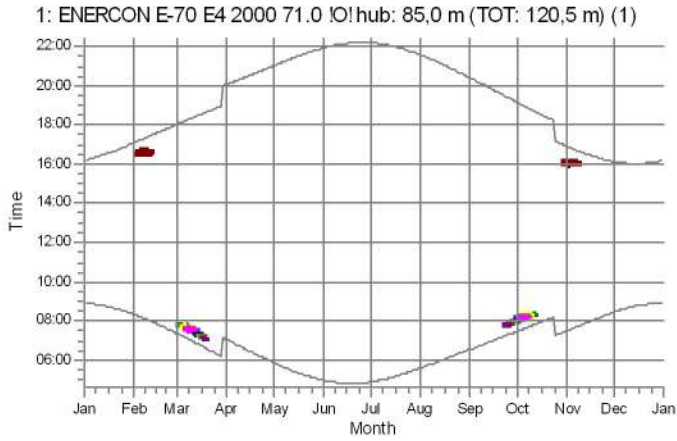
Table with 13 columns (January to December) and 31 rows of shadow data. Each row contains start and end times for each month, and a final row summarizes 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E70



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)

- G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

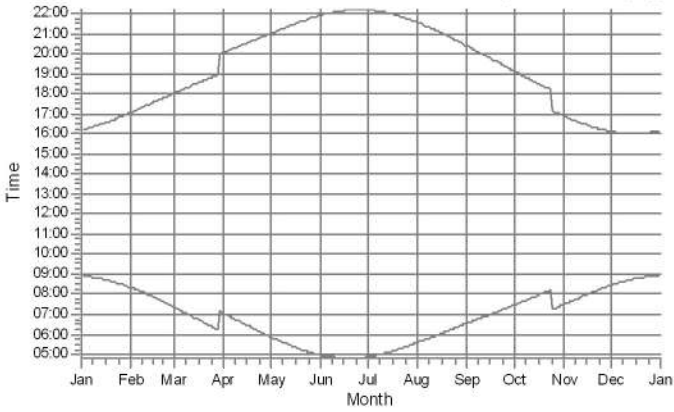
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Calculated:
2021.06.16 14:57/3.4.415

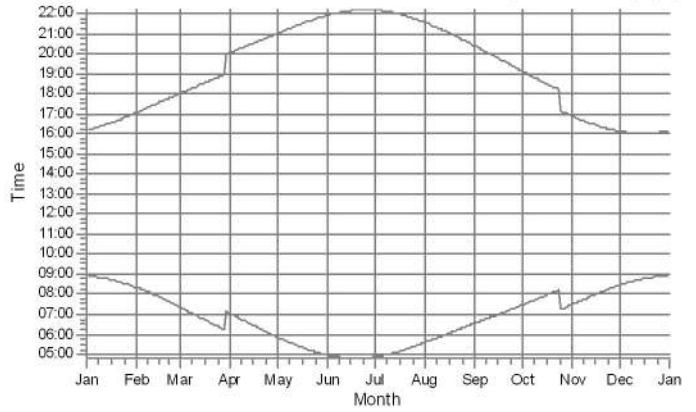
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E70

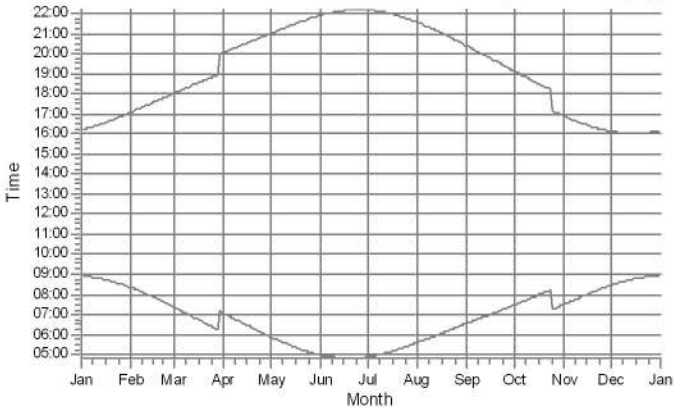
7: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)



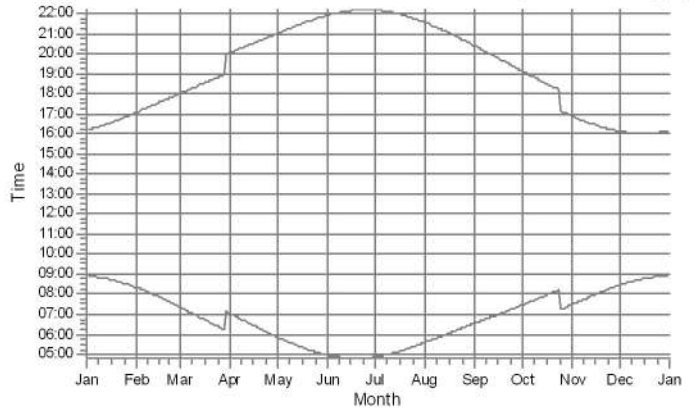
8: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)



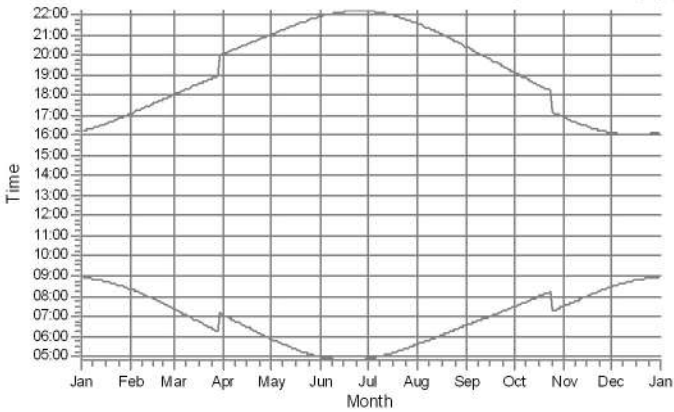
9: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)



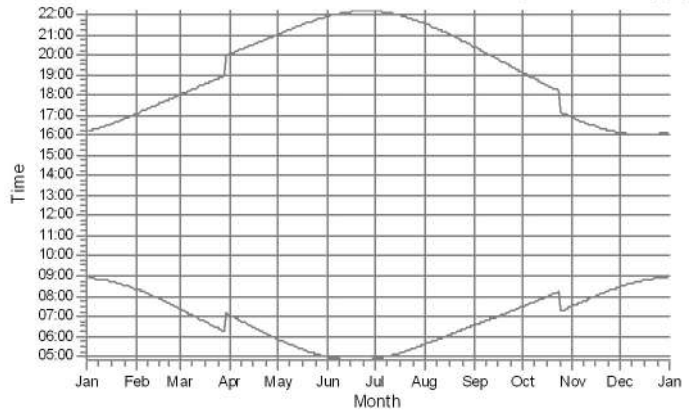
10: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)



11: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)



12: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)

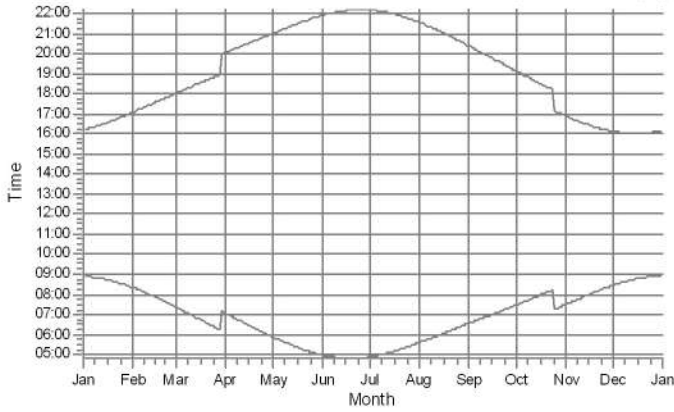


Shadow receptors

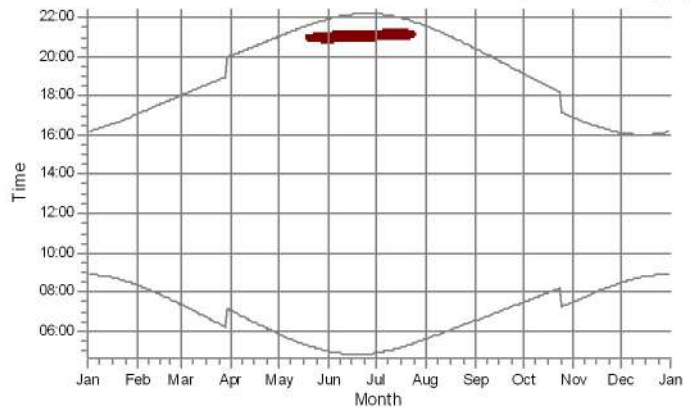
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E70

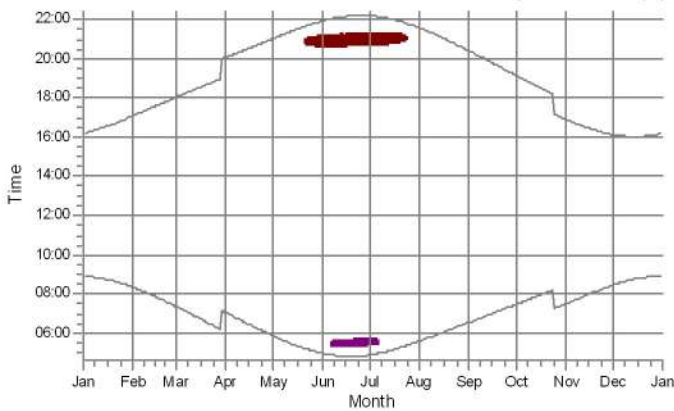
13: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (8)



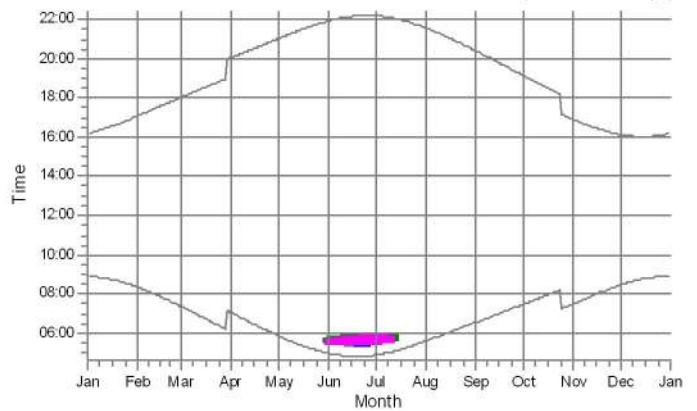
14: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (9)



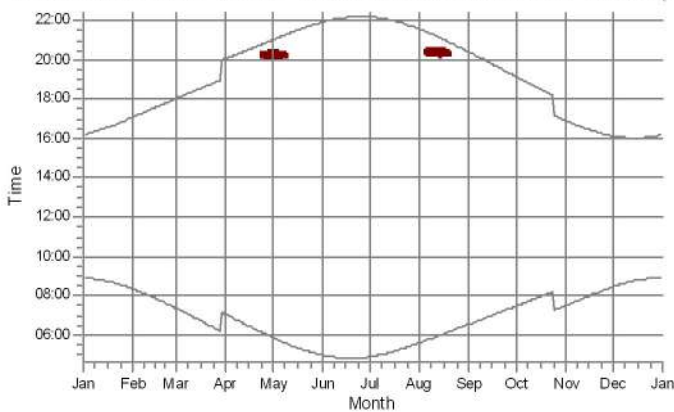
15: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (10)



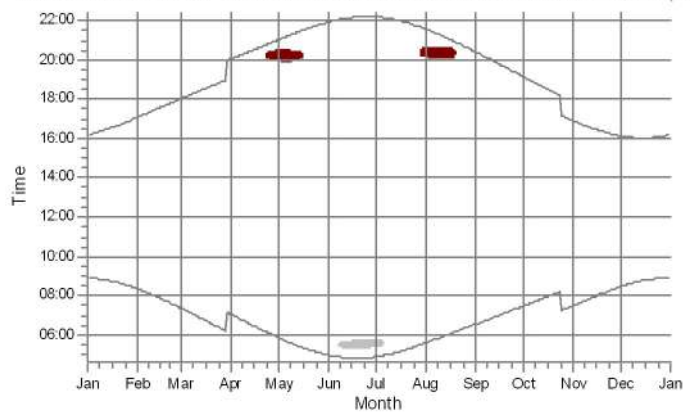
16: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (11)



17: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



18: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)

- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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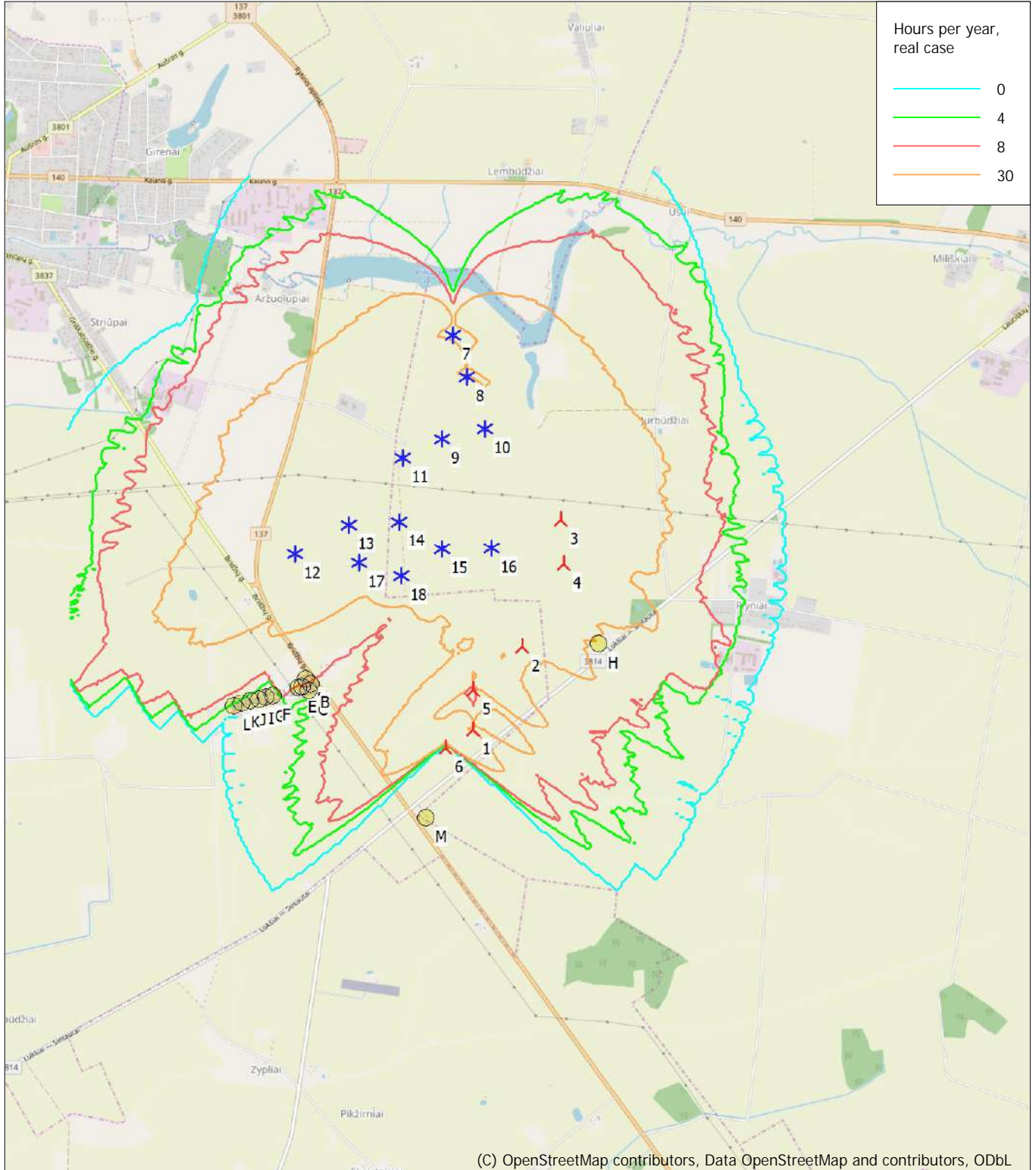
Raminta Survilè / r.survile@infraplanas.lt

Calculated:

2021.06.16 14:57/3.4.415

SHADOW - Map

Calculation: Suminis poveikis Enercon E70



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL

0 500 1000 1500 2000 m

Map: EMD OpenStreetMap , Print scale 1:40.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 442.440 North: 6.088.240

▲ New WTG * Existing WTG 📍 Shadow receptor

Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Main Result

Calculation: Suminis poveikis Enercon E70 Shut down
Assumptions for shadow calculations

Maximum distance for influence
Calculate only when more than 20 % of sun is covered by the blade
Please look in WTG table

Minimum sun height over horizon for influence 3 °
Day step for calculation 1 days
Time step for calculation 1 minutes

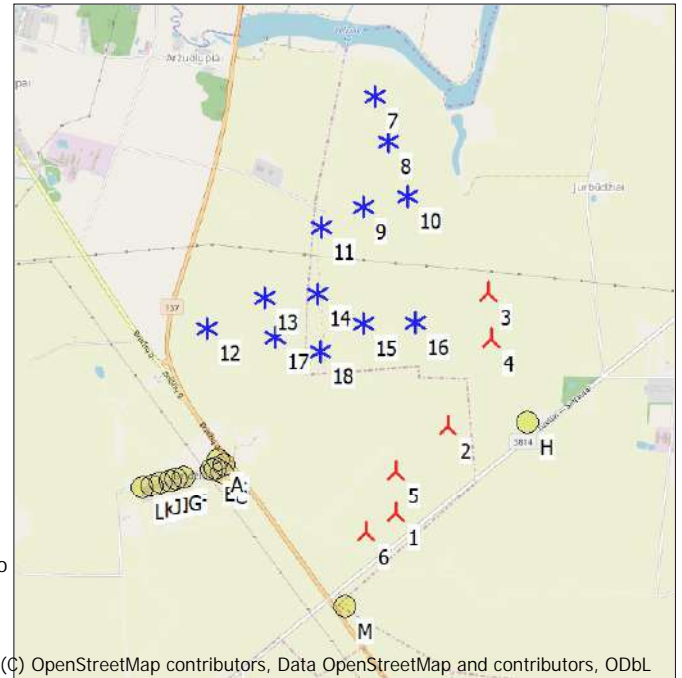
Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Flicker curtailment according to specified plan

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo
Obstacles used in calculation
Eye height for map: 1,5 m
Grid resolution: 1,0 m

All coordinates are in
Lithuanian TM LKS94-LKS94 (LT)



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL

Scale 1:50.000
New WTG Existing WTG Shadow receptor

WTGs

Y	X	Z	Row data/Description	WTG type		Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
				Valid	Manufact.					Calculation [m]	RPM [RPM]
			[m]								
1	442.261	6.087.347	50,0 ENERCON E-70 E4 20...No	Yes	ENERCON	E-70 E4-2.000	2.000	71,0	85,0	1.643	20,0
2	442.609	6.087.922	50,0 ENERCON E-70 E4 20...No	Yes	ENERCON	E-70 E4-2.000	2.000	71,0	85,0	1.643	20,0
3	442.891	6.088.803	50,3 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
4	442.908	6.088.497	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
5	442.265	6.087.626	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
6	442.058	6.087.221	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
7	442.152	6.090.108	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
8	442.241	6.089.811	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
9	442.064	6.089.378	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
10	442.365	6.089.446	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
11	441.791	6.089.249	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
12	441.022	6.088.592	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
13	441.405	6.088.791	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
14	441.755	6.088.807	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
15	442.055	6.088.609	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
16	442.405	6.088.612	50,0 NORDEX N149/4.0-4....Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
17	441.469	6.088.526	50,0 GE WIND ENERGY 5....Yes	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0
18	441.767	6.088.429	50,0 GE WIND ENERGY 5....Yes	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0

Shadow receptor-Input

No.	Y	X	Z	Width [m]	Height [m]	Elevation a.g.l. [m]	Slope of window [°]	Direction mode	Eye height (ZVI) a.g.l. [m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

To be continued on next page...

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Main Result

Calculation: Suminis poveikis Enercon E70 Shut down

...continued from previous page

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Calculation Results

Shadow receptor

Shadow, expected values

No.	Shadow hours per year [h/year]	Avoided hours per year [h/year]
A*	9:08	0:13
B*	6:45	0:14
C*	5:26	0:13
D*	7:36	0:11
E*	7:55	0:10
F	1:56	
G	1:41	
H*	26:18	3:01
I	1:31	
J	1:58	
K	3:03	
L	2:31	
M	0:00	

* Receptors where shadow flicker is reduced by curtailment

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Stopped due to flicker curtailment [h/year]	Expected [h/year]
1	ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)	13:32		3:43
2	ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)	9:43	9:24	4:01
3	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)	0:00		0:00
4	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)	0:00		0:00
5	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)	14:21		4:46
6	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)	18:05		4:43
7	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)	0:00		0:00
8	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)	0:00		0:00
9	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)	0:00		0:00
10	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)	0:00		0:00
11	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)	0:00		0:00
12	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)	0:00		0:00
13	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)	0:00		0:00
14	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)	22:38		9:40
15	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)	32:58		13:47
16	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (11)	17:16		6:40
17	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)	8:59		4:11
18	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)	20:12		9:03

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June		
1	08:53	08:20	07:20	07:46 (1)	07:03	05:51		05:32 (16)
	16:10	17:04	18:02	07:49 (1)	20:03	21:02	13	05:45 (16)
2	08:53	08:19	07:18	07:43 (1)	07:00	05:48		05:31 (16)
	16:11	17:06	18:04	07:50 (1)	20:05	21:03	14	05:45 (16)
3	08:52	08:17	07:16	07:41 (1)	06:57	05:46		05:31 (16)
	16:13	17:08	18:06	07:51 (1)	20:07	21:05	16	05:47 (16)
4	08:52	08:15	07:13	07:38 (1)	06:55	05:44		05:30 (16)
	16:14	17:10	18:08	07:50 (1)	20:09	21:07	17	05:47 (16)
5	08:52	08:13	07:11	07:37 (1)	06:52	05:42		05:30 (16)
	16:15	17:12	18:10	07:51 (1)	20:11	21:09	18	05:48 (16)
6	08:51	08:11	07:08	07:37 (1)	06:50	05:40		05:30 (16)
	16:17	17:14	18:12	07:50 (1)	20:13	21:11	19	05:49 (16)
7	08:51	08:09	07:06	07:37 (1)	06:47	05:38		05:30 (16)
	16:18	17:16	18:14	07:48 (1)	20:15	21:13	19	05:49 (16)
8	08:50	08:07	07:03	07:39 (1)	06:45	05:36		05:29 (16)
	16:19	17:18	18:16	07:46 (1)	20:17	21:15	20	05:49 (16)
9	08:50	08:05	07:01		06:42	05:34		05:30 (16)
	16:21	17:21	18:18		20:19	21:17	20	05:50 (16)
10	08:49	08:03	06:58		06:40	05:32		05:30 (16)
	16:22	17:23	18:20		20:21	21:19	21	05:51 (16)
11	08:48	08:01	06:56		06:37	05:30		05:29 (16)
	16:24	17:25	18:22		20:23	21:20	21	05:50 (16)
12	08:47	07:59	06:53		06:35	05:28		05:30 (16)
	16:26	17:27	18:24		20:25	21:22	21	05:51 (16)
13	08:46	07:57	06:51		06:33	05:26		05:30 (16)
	16:27	17:29	18:26		20:27	21:24	22	05:52 (16)
14	08:46	07:55	08:22 (6)	06:48	06:30	05:24		05:29 (16)
	16:29	17:31	3 08:25 (6)	18:28	20:29	21:26	22	05:51 (16)
15	08:45	07:53	08:19 (6)	06:46	06:28	05:23		05:30 (16)
	16:31	17:33	7 08:26 (6)	18:30	20:31	21:28	22	05:52 (16)
16	08:44	07:50	08:17 (6)	06:43	06:25	05:21		05:30 (16)
	16:33	17:35	10 08:27 (6)	18:32	20:33	21:29	22	05:52 (16)
17	08:42	07:48	08:15 (6)	06:41	06:23	05:19		05:30 (16)
	16:34	17:37	13 08:28 (6)	18:34	20:34	21:31	22	05:52 (16)
18	08:41	07:46	08:12 (6)	06:38	06:20	05:17		05:30 (16)
	16:36	17:39	15 08:27 (6)	18:36	20:36	21:33	22	05:52 (16)
19	08:40	07:44	08:10 (6)	06:36	07:00 (5)	06:18		05:30 (16)
	16:38	17:42	17 08:27 (6)	18:38	2 07:02 (5)	20:38	23	05:53 (16)
20	08:39	07:41	08:10 (6)	06:33	06:57 (5)	06:16		05:30 (16)
	16:40	17:44	18 08:28 (6)	18:40	6 07:03 (5)	20:40	23	05:53 (16)
21	08:38	07:39	08:10 (6)	06:31	06:55 (5)	06:13		05:31 (16)
	16:42	17:46	16 08:26 (6)	18:42	9 07:04 (5)	20:42	23	05:54 (16)
22	08:36	07:37	08:11 (6)	06:28	06:52 (5)	06:11		05:31 (16)
	16:44	17:48	15 08:26 (6)	18:44	11 07:03 (5)	20:44	23	05:54 (16)
23	08:35	07:35	08:12 (6)	06:25	06:50 (5)	06:09		05:31 (16)
	16:46	17:50	12 08:24 (6)	18:46	14 07:04 (5)	20:46	23	05:54 (16)
24	08:33	07:32	08:14 (6)	06:23	06:47 (5)	06:06		05:31 (16)
	16:48	17:52	8 08:22 (6)	18:48	16 07:03 (5)	20:48	23	05:54 (16)
25	08:32	07:30	06:20	06:47 (5)	06:04	05:07		05:32 (16)
	16:50	17:54	14 07:01 (5)	20:50	21:44	22:11	22	05:54 (16)
26	08:30	07:28	06:18	06:48 (5)	06:02	05:05		05:32 (16)
	16:52	17:56	13 07:01 (5)	20:52	21:46	22:11	22	05:54 (16)
27	08:29	07:25	06:15	06:49 (5)	05:59	05:04		05:33 (16)
	16:54	17:58	9 06:58 (5)	20:54	21:47	22:11	22	05:55 (16)
28	08:27	07:23	06:13	05:57	05:03	04:52		05:32 (16)
	16:56	18:00	18:56	20:56	21:49	22:11	22	05:54 (16)
29	08:26		07:10	05:55	05:02	04:50		05:33 (16)
	16:58		19:58	20:58	21:50	4 05:40 (16)	22	05:55 (16)
30	08:24		07:08	05:53	05:00	05:34 (16)		05:34 (16)
	17:00		20:00	21:00	21:52	8 05:42 (16)	21	05:55 (16)
31	08:22		07:05		04:59	05:33 (16)		
	17:02		20:01		21:53	11 05:44 (16)		
Potential sun hours	244	270	366	422	499	517		
Total, worst case		134	171	1	23	620		
Sun reduction		0,24	0,34	0,39	0,52	0,48		
Oper. time red.		1,00	1,00	1,00	1,00	1,00		
Wind dir. red.		0,91	0,98	0,98	0,80	0,80		
Total reduction		0,23	0,34	0,39	0,42	0,39		
Total, real		30	58	0	10	245		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December				
1	04:54	05:33 (16)	05:36	06:33	07:03 (2)	07:29	07:30	08:27		
	22:10	05:55 (16)	21:32	20:23	07:11 (2)	19:07	16:53	16:06		
2	04:54	05:34 (16)	05:37	06:35	07:03 (2)	07:31	07:32	08:29		
	22:09	05:55 (16)	21:30	20:20	07:12 (2)	19:04	16:51	16:05		
3	04:55	05:35 (16)	05:39	06:36	07:05 (2)	07:32	07:34	08:30		
	22:09	05:55 (16)	21:29	20:18	07:12 (2)	19:01	16:49	16:05		
4	04:56	05:35 (16)	05:41	06:38	07:06 (2)	07:34	07:36	08:32		
	22:08	05:55 (16)	21:27	20:15	07:11 (2)	18:59	16:47	16:04		
5	04:57	05:36 (16)	05:43	06:40	07:08 (2)	07:36	08:18 (1)	07:38	08:34	
	22:08	05:55 (16)	21:25	20:13	07:11 (2)	18:56	4	08:22 (1)	16:45	16:03
6	04:58	05:35 (16)	05:45	06:42	07:38	08:15 (1)	07:40	08:35		
	22:07	05:54 (16)	21:23	20:10	18:54	9	08:24 (1)	16:43	16:03	
7	04:59	05:36 (16)	05:46	06:44	07:40	08:14 (1)	07:42	08:36		
	22:06	05:54 (16)	21:21	20:08	18:51	11	08:25 (1)	16:41	16:02	
8	05:00	05:37 (16)	05:48	06:46	07:42	08:13 (1)	07:44	08:38		
	22:06	05:54 (16)	21:18	20:05	18:49	13	08:26 (1)	16:39	16:02	
9	05:01	05:37 (16)	05:50	06:48	07:44	08:12 (1)	07:46	08:39		
	22:05	05:54 (16)	21:16	20:03	18:46	14	08:26 (1)	16:37	16:01	
10	05:02	05:38 (16)	05:52	06:49	07:46	08:14 (1)	07:48	08:40		
	22:04	05:53 (16)	21:14	20:00	18:44	11	08:25 (1)	16:35	16:01	
11	05:03	05:40 (16)	05:54	06:51	07:48	08:16 (1)	07:50	08:41		
	22:03	05:54 (16)	21:12	19:58	18:41	9	08:25 (1)	16:34	16:01	
12	05:05	05:41 (16)	05:55	06:53	07:50	08:18 (1)	07:52	08:43		
	22:02	05:53 (16)	21:10	19:55	18:39	5	08:23 (1)	16:32	16:00	
13	05:06	05:42 (16)	05:57	06:55	07:52	08:20 (1)	07:54	08:44		
	22:01	05:51 (16)	21:08	19:53	18:37	1	08:21 (1)	16:30	16:00	
14	05:07	05:43 (16)	05:59	06:57	07:54	07:56	07:56	08:45		
	22:00	05:50 (16)	21:06	19:50	18:34	16:28	16:28	16:00		
15	05:08	06:01	06:59	07:56	07:58	08:46				
	21:59	21:03	19:47	18:32	16:27	16:00				
16	05:10	06:03	07:01	07:58	08:00	08:47				
	21:58	21:01	19:45	8	07:47 (5)	18:29	16:25	16:00		
17	05:11	06:05	07:02	07:37 (5)	08:00	08:48 (6)	08:02	08:47		
	21:56	20:59	19:42	12	07:49 (5)	18:27	3	08:51 (6)	16:23	16:00
18	05:13	06:07	07:04	07:36 (5)	08:02	08:44 (6)	08:04	08:48		
	21:55	20:57	19:40	14	07:50 (5)	18:25	10	08:54 (6)	16:22	16:00
19	05:14	06:08	07:06	07:34 (5)	08:04	08:42 (6)	08:06	08:49		
	21:54	20:54	19:37	15	07:49 (5)	18:22	14	08:56 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:41 (6)	08:08	08:50		
	21:52	20:52	19:35	14	07:49 (5)	18:20	16	08:57 (6)	16:19	16:01
21	05:17	06:12	07:10	07:37 (5)	08:08	08:40 (6)	08:10	08:50		
	21:51	20:50	19:32	12	07:49 (5)	18:18	17	08:57 (6)	16:18	16:01
22	05:19	06:14	07:12	07:39 (5)	08:10	08:40 (6)	08:12	08:51		
	21:49	20:47	19:30	9	07:48 (5)	18:15	18	08:58 (6)	16:16	16:02
23	05:20	06:16	07:14	07:41 (5)	08:12	08:41 (6)	08:13	08:51		
	21:48	20:45	19:27	7	07:48 (5)	18:13	17	08:58 (6)	16:15	16:02
24	05:22	06:18	07:16	07:43 (5)	08:14	08:43 (6)	08:15	08:52		
	21:46	20:42	19:24	3	07:46 (5)	18:11	14	08:57 (6)	16:14	16:03
25	05:24	06:20	07:17	07:16	07:16	07:45 (6)	08:17	08:52		
	21:45	20:40	19:22	17:08	12	07:57 (6)	16:12	16:04		
26	05:25	06:22	07:19	07:18	07:18	07:47 (6)	08:19	08:52		
	21:43	20:38	19:19	17:06	9	07:56 (6)	16:11	16:04		
27	05:27	06:23	07:21	07:20	07:20	07:49 (6)	08:21	08:53		
	21:41	20:35	19:17	17:04	6	07:55 (6)	16:10	16:05		
28	05:29	06:25	07:23	07:22	07:22	07:52 (6)	08:22	08:53		
	21:40	20:33	19:14	17:02	2	07:54 (6)	16:09	16:06		
29	05:30	06:27	07:25	07:24	07:24	08:24	08:24	08:53		
	21:38	20:30	19:12	17:00	16:08	16:07				
30	05:32	06:29	07:27	07:26	08:26	08:53				
	21:36	20:28	19:09	16:57	16:07	16:08				
31	05:34	06:31	07:06 (2)	07:28	08:53					
	21:34	20:25	3	07:09 (2)	16:55	16:09				
Potential sun hours	519	464	383	327	254	227				
Total, worst case	230	3	126	215						
Sun reduction	0,49	0,52	0,40	0,31						
Oper. time red.	1,00	1,00	1,00	1,00						
Wind dir. red.	0,80	0,98	1,00	0,93						
Total reduction	0,40	0,52	0,40	0,29						
Total, real	91	2	50	62						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June		
1	08:53	08:20	07:20	07:03	05:51	04:58		
	16:10	17:04	18:02	20:03	21:02	21:54		
2	08:53	08:19	07:18	07:00	05:48	04:57		
	16:11	17:06	18:04	20:05	21:03	21:56		
3	08:52	08:17	07:16	07:41 (1)	06:57	05:46		
	16:13	17:08	18:06	5 07:46 (1)	20:07	21:05		
4	08:52	08:15	07:13	07:38 (1)	06:55	05:44		
	16:14	17:10	18:08	8 07:46 (1)	20:09	21:07		
5	08:52	08:13	07:11	07:36 (1)	06:52	05:42		
	16:15	17:12	18:10	11 07:47 (1)	20:11	21:09		
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40		
	16:17	17:14	18:12	14 07:47 (1)	20:13	21:11	7	05:29 (16)
7	08:51	08:09	07:06	07:32 (1)	06:47	05:38		
	16:18	17:16	18:14	14 07:46 (1)	20:15	21:13	9	05:28 (16)
8	08:50	08:07	07:03	07:33 (1)	06:45	05:36		
	16:19	17:18	18:16	13 07:46 (1)	20:17	21:15	11	05:27 (16)
9	08:50	08:05	07:01	07:33 (1)	06:42	05:34		
	16:21	17:21	18:18	11 07:44 (1)	20:19	21:17	12	05:27 (16)
10	08:49	08:03	06:58	07:35 (1)	06:40	05:32		
	16:22	17:23	18:20	8 07:43 (1)	20:21	21:19	13	05:27 (16)
11	08:48	08:01	06:56		06:37	05:30		
	16:24	17:25	18:22		20:23	21:20	14	05:26 (16)
12	08:47	07:59	06:53		06:35	05:28		
	16:26	17:27	18:24		20:25	21:22	15	05:26 (16)
13	08:46	07:57	06:51		06:33	05:26		
	16:27	17:29	18:26		20:27	21:24	16	05:26 (16)
14	08:46	07:55	06:48		06:30	05:24		
	16:29	17:31	18:28		20:29	21:26	16	05:25 (16)
15	08:45	07:53	08:19 (6)	06:46	06:28	05:23		
	16:31	17:33	2 08:21 (6)	18:30	20:31	21:28	17	05:25 (16)
16	08:44	07:50	08:17 (6)	06:43	06:25	05:21		
	16:33	17:35	6 08:23 (6)	18:32	20:33	21:29	16	05:26 (16)
17	08:42	07:48	08:15 (6)	06:41	06:23	05:19		
	16:34	17:37	9 08:24 (6)	18:34	20:34	21:31	17	05:42 (16)
18	08:41	07:46	08:12 (6)	06:38	06:20	05:17		
	16:36	17:39	12 08:24 (6)	18:36	20:36	21:33	17	05:26 (16)
19	08:40	07:44	08:10 (6)	06:36	06:18	05:16		
	16:38	17:42	15 08:25 (6)	18:38	20:38	21:35	17	05:43 (16)
20	08:39	07:41	08:08 (6)	06:33	06:16	05:14		
	16:40	17:44	18 08:26 (6)	18:40	20:40	21:36	17	05:26 (16)
21	08:38	07:39	08:06 (6)	06:31	06:13	05:13		
	16:42	17:46	19 08:25 (6)	18:42	20:42	21:38	18	05:27 (16)
22	08:36	07:37	08:07 (6)	06:28	06:11	05:11		
	16:44	17:48	18 08:25 (6)	18:44	4 06:56 (5)	20:44	22:11	17 05:44 (16)
23	08:35	07:35	08:07 (6)	06:25	06:50 (5)	06:09	05:10	
	16:46	17:50	17 08:24 (6)	18:46	8 06:58 (5)	20:46	21:41	17 05:27 (16)
24	08:33	07:32	08:08 (6)	06:23	06:47 (5)	06:06	05:08	
	16:48	17:52	15 08:23 (6)	18:48	11 06:58 (5)	20:48	21:43	17 05:44 (16)
25	08:32	07:30	08:08 (6)	06:20	06:44 (5)	06:04	05:07	
	16:50	17:54	13 08:21 (6)	18:50	13 06:57 (5)	20:50	21:44	17 05:28 (16)
26	08:30	07:28	08:11 (6)	06:18	06:42 (5)	06:02	05:05	
	16:52	17:56	8 08:19 (6)	18:52	15 06:57 (5)	20:52	21:46	17 05:45 (16)
27	08:29	07:25		06:15	06:40 (5)	05:59	05:04	
	16:54	17:58		18:54	16 06:56 (5)	20:54	21:47	17 05:28 (16)
28	08:27	07:23		06:13	06:41 (5)	05:57	05:03	
	16:56	18:00		18:56	15 06:56 (5)	20:56	21:49	17 05:45 (16)
29	08:26			07:10	07:41 (5)	05:55	05:02	
	16:58			19:58	13 07:54 (5)	20:58	21:50	16 05:29 (16)
30	08:24			07:08	07:43 (5)	05:53	05:00	
	17:00			20:00	9 07:52 (5)	21:00	21:52	15 05:30 (16)
31	08:22			07:05			04:59	
	17:02			20:01			21:53	
Potential sun hours	244	270	366		422	499	517	
Total, worst case			152	188				382
Sun reduction			0,24	0,34				0,48
Oper. time red.			1,00	1,00				1,00
Wind dir. red.			0,91	0,99				0,78
Total reduction			0,23	0,34				0,39
Total, real			35	64				147

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December					
1	04:54	05:30 (16)	05:36	06:33	07:01 (2)	07:29	07:30	08:27			
	22:10	05:44 (16)	21:32	20:23	07:08 (2)	19:07	16:53	16:06			
2	04:54	05:31 (16)	05:37	06:35	07:03 (2)	07:31	07:32	08:29			
	22:09	05:44 (16)	21:30	20:20	07:07 (2)	19:04	16:51	16:05			
3	04:55	05:32 (16)	05:39	06:36	07:05 (2)	07:32	08:14 (1)	07:34	08:30		
	22:09	05:44 (16)	21:29	20:18	07:06 (2)	19:01	08:20 (1)	16:49	16:05		
4	04:56	05:33 (16)	05:41	06:38		07:34	08:12 (1)	07:36	08:32		
	22:08	05:44 (16)	21:27	20:15		18:59	08:22 (1)	16:47	16:04		
5	04:57	05:34 (16)	05:43	06:40		07:36	08:10 (1)	07:38	08:33		
	22:08	05:44 (16)	21:25	20:13		18:56	08:23 (1)	16:45	16:03		
6	04:58	05:34 (16)	05:45	06:42		07:38	08:09 (1)	07:40	08:35		
	22:07	05:42 (16)	21:23	20:10		18:54	08:23 (1)	16:43	16:03		
7	04:59	05:36 (16)	05:46	06:44		07:40	08:09 (1)	07:42	08:36		
	22:06	05:40 (16)	21:21	20:08		18:51	08:23 (1)	16:41	16:02		
8	05:00		05:48	06:46		07:42	08:10 (1)	07:44	08:38		
	22:06		21:18	20:05		18:49	08:23 (1)	16:39	16:02		
9	05:01		05:50	06:48		07:44	08:12 (1)	07:46	08:39		
	22:05		21:16	20:03		18:46	08:22 (1)	16:37	16:01		
10	05:02		05:52	06:49		07:46	08:14 (1)	07:48	08:40		
	22:04		21:14	20:00		18:44	08:21 (1)	16:35	16:01		
11	05:03		05:54	06:51		07:48	08:16 (1)	07:50	08:41		
	22:03		21:12	19:58		18:41	08:19 (1)	16:34	16:01		
12	05:05		05:55	06:53		07:50		07:52	08:43		
	22:02		21:10	19:55		18:39		16:32	16:00		
13	05:06		05:57	06:55	07:35 (5)	07:52		07:54	08:44		
	22:01		21:08	19:53	8	07:43 (5)	18:37	16:30	16:00		
14	05:07		05:59	06:57	07:32 (5)	07:54		07:56	08:45		
	22:00		21:06	19:50	12	07:44 (5)	18:34	16:28	16:00		
15	05:08		06:01	06:59	07:31 (5)	07:56	08:46 (6)	07:58	08:46		
	21:59		21:03	19:47	14	07:45 (5)	18:32	3	08:49 (6)	16:27	16:00
16	05:10		06:03	07:01	07:30 (5)	07:58		08:42 (6)	08:00	08:47	
	21:58		21:01	19:45	16	07:46 (5)	18:29	10	08:52 (6)	16:25	16:00
17	05:11		06:05	07:02	07:30 (5)	08:00		08:40 (6)	08:02	08:47	
	21:56		20:59	19:42	16	07:46 (5)	18:27	14	08:54 (6)	16:23	16:00
18	05:13		06:07	07:04	07:32 (5)	08:02		08:39 (6)	08:04	08:48	
	21:55		20:57	19:40	14	07:46 (5)	18:25	16	08:55 (6)	16:22	16:00
19	05:14		06:08	07:06	07:33 (5)	08:04		08:38 (6)	08:06	08:49	
	21:54		20:54	19:37	11	07:44 (5)	18:22	17	08:55 (6)	16:20	16:01
20	05:16		06:10	07:08	07:35 (5)	08:06		08:37 (6)	08:08	08:50	
	21:52		20:52	19:35	8	07:43 (5)	18:20	18	08:55 (6)	16:19	16:01
21	05:17		06:12	07:10	07:37 (5)	08:08		08:37 (6)	08:10	08:50	
	21:51		20:50	19:32	5	07:42 (5)	18:18	18	08:55 (6)	16:18	16:01
22	05:19		06:14	07:12	07:39 (5)	08:10		08:39 (6)	08:12	08:51	
	21:49		20:47	19:30	1	07:40 (5)	18:15	17	08:56 (6)	16:16	16:02
23	05:20		06:16	07:14		08:12		08:41 (6)	08:13	08:51	
	21:48		20:45	19:27		18:13	14	08:55 (6)	16:15	16:02	
24	05:22		06:18	07:16		08:14		08:43 (6)	08:15	08:52	
	21:46		20:42	19:24		18:11	11	08:54 (6)	16:14	16:03	
25	05:24		06:20	07:17		07:16		07:45 (6)	08:17	08:52	
	21:45		20:40	19:22		17:08	8	07:53 (6)	16:12	16:04	
26	05:25		06:22	07:19		07:18		07:47 (6)	08:19	08:52	
	21:43		20:38	19:19		17:06	5	07:52 (6)	16:11	16:04	
27	05:27		06:23	07:21		07:20		07:49 (6)	08:21	08:53	
	21:41		20:35	19:17		17:04	1	07:50 (6)	16:10	16:05	
28	05:29		06:25	07:23		07:22		08:22	08:22	08:53	
	21:40		20:33	19:14		17:02		16:09	16:06	16:06	
29	05:30		06:27	07:00 (2)	07:25	07:24		08:24	08:24	08:53	
	21:38		20:30	7	07:07 (2)	19:12		17:00	16:08	16:07	
30	05:32		06:29	06:58 (2)	07:27	07:26		08:26	08:53	16:08	
	21:36		20:28	10	07:08 (2)	19:09		16:57	16:07	16:08	
31	05:34		06:31	06:59 (2)		07:28			08:53	16:08	
	21:34		20:25	9	07:08 (2)	16:55		16:55	16:09	16:09	
Potential sun hours	519	464		383		327		254		227	
Total, worst case	72		26		117		242				
Sun reduction	0,49		0,52		0,40		0,31				
Oper. time red.	1,00		1,00		1,00		1,00				
Wind dir. red.	0,78		0,98		1,00		0,94				
Total reduction	0,39		0,51		0,40		0,29				
Total, real	28		13		47		71				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:59 (6) 08:12 (6)	07:03 20:03	07:33 (5) 21:02
2	08:53 16:11	08:19 17:06	07:18 18:04	08:00 (6) 08:09 (6)	07:00 20:05	07:33 (5) 21:03
3	08:52 16:13	08:17 17:08	07:16 18:06	07:03 20:07	06:57 20:07	07:36 (5) 21:05
4	08:52 16:14	08:15 17:10	07:13 18:08	07:03 20:09	06:55 20:09	07:41 (5) 21:05
5	08:52 16:15	08:13 17:12	07:11 18:10	07:03 20:11	06:52 20:11	07:41 (5) 21:09
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:35 (1)	06:50 20:13	05:40 21:11
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 07:36 (1)	06:47 20:15	05:38 21:13
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 07:37 (1)	06:45 20:17	05:36 21:15
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 07:37 (1)	06:42 20:19	05:34 21:17
10	08:49 16:22	08:03 17:23	06:58 18:20	07:24 (1) 07:38 (1)	06:40 20:21	05:32 21:19
11	08:48 16:24	08:01 17:25	06:56 18:22	07:23 (1) 07:37 (1)	06:37 20:23	05:30 21:20
12	08:47 16:26	07:59 17:27	06:53 18:24	07:24 (1) 07:36 (1)	06:35 20:25	05:28 21:22
13	08:46 16:27	07:57 17:29	06:51 18:26	07:25 (1) 07:34 (1)	06:33 20:27	05:26 21:24
14	08:46 16:29	07:55 17:31	06:48 18:28	07:28 (1) 07:32 (1)	06:30 20:29	05:24 21:26
15	08:45 16:31	07:53 17:33	06:46 18:30	07:28 (1) 20:31	06:28 20:31	05:23 21:28
16	08:44 16:33	07:50 17:35	06:43 18:32	07:24 (1) 20:33	06:25 20:33	05:21 21:29
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	06:23 20:34	05:19 21:31
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	06:20 20:36	05:17 21:33
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	06:18 20:38	05:16 21:35
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	06:16 20:40	05:14 21:36
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	06:13 20:42	05:13 21:38
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	06:11 20:44	05:11 21:40
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	06:09 20:46	05:10 21:41
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	06:06 20:48	05:08 21:43
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	06:04 20:50	05:07 21:44
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	06:02 20:52	05:05 21:46
27	08:29 16:54	07:25 17:58	06:15 18:54	06:00 20:54	06:00 20:54	05:04 21:47
28	08:27 16:56	07:23 18:00	06:13 18:56	06:00 20:56	06:00 20:56	05:03 21:49
29	08:26 16:58	07:21 18:02	06:11 18:58	06:00 20:58	06:00 20:58	05:02 21:50
30	08:24 17:00	07:19 18:04	06:09 19:00	06:00 21:00	06:00 21:00	05:00 21:52
31	08:22 17:02	07:17 18:06	06:07 19:02	06:00 21:02	06:00 21:02	04:59 21:53
Potential sun hours	244	270	366	422	499	517
Total, worst case		124	178	29		239
Sun reduction		0,24	0,34	0,39		0,48
Oper. time red.		1,00	1,00	1,00		1,00
Wind dir. red.		0,93	0,98	1,00		0,77
Total reduction		0,23	0,34	0,40		0,38
Total, real		29	61	12		91

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December			
1	04:54	05:29 (16)	05:36	06:33	07:29	08:04 (1)	07:30	08:27	
	22:10	05:37 (16)	21:32	20:23	19:07	08:15 (1)	16:53	16:06	
2	04:54	05:31 (16)	05:37	06:35	07:31	08:02 (1)	07:32	08:29	
	22:09	05:37 (16)	21:30	20:20	19:04	08:15 (1)	16:51	16:05	
3	04:55	05:33 (16)	05:39	06:36	07:32	08:02 (1)	07:34	08:30	
	22:09	05:35 (16)	21:29	20:18	19:01	08:16 (1)	16:49	16:05	
4	04:56		05:41	06:38	07:34	08:02 (1)	07:36	08:32	
	22:08		21:27	20:15	18:59	08:15 (1)	16:47	16:04	
5	04:57		05:43	06:40	07:36	08:04 (1)	07:38	08:33	
	22:08		21:25	20:13	18:56	08:15 (1)	16:45	16:03	
6	04:58		05:45	06:42	07:38	08:06 (1)	07:40	08:35	
	22:07		21:23	20:10	18:54	08:14 (1)	16:43	16:03	
7	04:59		05:46	06:44	07:40	08:08 (1)	07:42	08:36	
	22:06		21:21	20:08	18:51	08:12 (1)	16:41	16:02	
8	05:00		05:48	06:46	07:42		07:44	08:38	
	22:06		21:18	20:05	18:49		16:39	16:02	
9	05:01		05:50	06:48	07:44		07:46	08:39	
	22:05		21:16	20:03	07:34 (5)	18:46	16:37	16:01	
10	05:02		05:52	06:49	07:46		07:48	08:40	
	22:04		21:14	20:00	07:37 (5)	18:44	16:35	16:01	
11	05:03		05:54	06:51	07:48	08:36 (6)	07:50	08:41	
	22:03		21:12	19:58	07:38 (5)	18:41	08:41 (6)	16:34	16:01
12	05:05		05:55	06:53	07:50	08:33 (6)	07:52	08:43	
	22:02		21:10	19:55	07:39 (5)	18:39	08:44 (6)	16:32	16:00
13	05:06		05:57	06:55	07:52	08:31 (6)	07:54	08:44	
	22:01		21:08	19:53	07:39 (5)	18:37	08:45 (6)	16:30	16:00
14	05:07		05:59	06:57	07:54	08:30 (6)	07:56	08:45	
	22:00		21:06	19:50	07:38 (5)	18:34	08:46 (6)	16:28	16:00
15	05:09		06:01	06:59	07:56	08:29 (6)	07:58	08:46	
	21:59		21:03	19:47	07:38 (5)	18:32	08:46 (6)	16:27	16:00
16	05:10		06:03	07:01	07:58	08:28 (6)	08:00	08:47	
	21:58		21:01	19:45	07:37 (5)	18:29	08:47 (6)	16:25	16:00
17	05:11		06:05	07:02	08:00	08:28 (6)	08:02	08:47	
	21:56		20:59	19:42	07:36 (5)	18:27	08:46 (6)	16:23	16:00
18	05:13		06:07	07:04	08:02	08:30 (6)	08:04	08:48	
	21:55		20:57	19:40	07:35 (5)	18:25	08:46 (6)	16:22	16:00
19	05:14		06:08	07:06	08:04	08:32 (6)	08:06	08:49	
	21:54		20:54	19:37	18:22	08:45 (6)	16:20	16:01	
20	05:16		06:10	07:08	08:06	08:34 (6)	08:08	08:50	
	21:52		20:52	19:35	18:20	08:44 (6)	16:19	16:01	
21	05:17		06:12	07:10	08:08	08:36 (6)	08:10	08:50	
	21:51		20:50	19:32	18:18	08:43 (6)	16:18	16:01	
22	05:19		06:14	07:12	08:10	08:39 (6)	08:12	08:51	
	21:49		20:47	19:30	18:15	08:42 (6)	16:16	16:02	
23	05:20		06:16	07:14	08:12		08:13	08:51	
	21:48		20:45	19:27	18:13		16:15	16:02	
24	05:22		06:18	07:16	08:14		08:15	08:52	
	21:46		20:42	19:24	18:11		16:14	16:03	
25	05:24		06:20	07:17	08:16		08:17	08:52	
	21:45		20:40	19:22	17:08		16:12	16:04	
26	05:25		06:22	06:55 (2)	07:19		08:19	08:52	
	21:43		20:38	07:00 (2)	19:19		16:11	16:04	
27	05:27		06:23	06:54 (2)	07:21		08:21	08:53	
	21:41		20:35	07:02 (2)	19:17		16:10	16:05	
28	05:29		06:25	06:54 (2)	07:23		08:22	08:53	
	21:40		20:33	07:03 (2)	19:14		16:09	16:06	
29	05:30		06:27	06:56 (2)	07:25		08:24	08:53	
	21:38		20:30	07:03 (2)	19:12		16:08	16:07	
30	05:32		06:29	06:58 (2)	07:27	08:05 (1)	08:26	08:53	
	21:36		20:28	07:03 (2)	19:09	08:13 (1)	16:07	16:08	
31	05:34		06:31	06:59 (2)	07:28		08:53	08:53	
	21:34		20:25	07:02 (2)	16:55		16:09	16:09	
Potential sun hours	519	464	383	327	254	227			
Total, worst case	16	37	110	223					
Sun reduction	0,49	0,52	0,40	0,31					
Oper. time red.	1,00	1,00	1,00	1,00					
Wind dir. red.	0,77	0,97	1,00	0,95					
Total reduction	0,38	0,51	0,40	0,30					
Total, real	6	19	44	66					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
--------------	------------------	-----------------	----------------------	---------------------------------	--------------------------------	----------------------------------	---------------------------------

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June						
1	08:53	08:20	07:20	08:06 (6)	07:03	05:51						
	16:10	17:04	18:02	2	08:08 (6)	20:03	21:02	21:54				
2	08:53	08:19	07:18		07:00	05:48	04:57	05:30 (16)				
	16:11	17:06	18:04		20:05	21:03	21:56	7	05:37 (16)			
3	08:52	08:17	07:16		06:57	05:46	04:56		05:30 (16)			
	16:13	17:08	18:06		20:07	21:05	21:57	9	05:39 (16)			
4	08:52	08:15	07:13		06:55	05:44	04:55		05:29 (16)			
	16:14	17:10	18:08		20:09	21:07	21:58	11	05:40 (16)			
5	08:52	08:13	07:11		07:36 (1)	06:52	05:42	04:55	05:28 (16)			
	16:15	17:12	18:10	4	07:40 (1)	20:11	21:09	21:59	13	05:41 (16)		
6	08:51	08:11	07:08		07:33 (1)	06:50	05:40	04:54		05:28 (16)		
	16:17	17:14	18:12	7	07:40 (1)	20:13	21:11	22:00	14	05:42 (16)		
7	08:51	08:09	07:06		07:30 (1)	06:47	05:38	04:53		05:27 (16)		
	16:18	17:16	18:14	10	07:40 (1)	20:15	21:13	22:01	16	05:43 (16)		
8	08:50	08:07	07:03		07:28 (1)	06:45	05:36	04:52		05:27 (16)		
	16:19	17:18	18:16	13	07:41 (1)	20:17	21:15	22:02	16	05:43 (16)		
9	08:50	08:05	07:01		07:27 (1)	06:42	05:34	04:52		05:27 (16)		
	16:21	17:21	18:18	13	07:40 (1)	20:19	21:17	22:03	17	05:44 (16)		
10	08:49	08:03	06:58		07:28 (1)	06:40	05:32	04:51		05:27 (16)		
	16:22	17:23	18:20	12	07:40 (1)	20:21	21:19	22:04	18	05:45 (16)		
11	08:48	08:01	06:56		07:28 (1)	06:37	05:30	04:51		05:26 (16)		
	16:24	17:25	18:22	10	07:38 (1)	20:23	21:20	22:05	18	05:44 (16)		
12	08:47	07:59	06:53		07:31 (1)	06:35	05:28	04:50		05:27 (16)		
	16:26	17:27	18:24	5	07:36 (1)	20:25	21:22	22:06	18	05:45 (16)		
13	08:46	07:57	06:51		06:33	05:26	04:50		05:27 (16)			
	16:27	17:29	18:26		20:27	21:24	22:07	19	05:46 (16)			
14	08:46	07:55	06:48		06:30	05:24	04:50		05:26 (16)			
	16:29	17:31	18:28		20:29	21:26	22:07	19	05:45 (16)			
15	08:45	07:53	06:46		06:28	05:23	04:49		05:26 (16)			
	16:31	17:33	18:30		20:31	21:28	22:08	20	05:46 (16)			
16	08:44	07:50	06:43		06:25	05:21	04:49		05:27 (16)			
	16:33	17:35	18:32		20:33	21:29	22:09	19	05:46 (16)			
17	08:42	07:48	06:41		06:23	05:19	04:49		05:27 (16)			
	16:34	17:37	18:34		20:34	21:31	22:09	20	05:47 (16)			
18	08:41	07:46	06:38		06:20	05:17	04:49		05:27 (16)			
	16:36	17:39	18:36		20:36	21:33	22:10	20	05:47 (16)			
19	08:40	07:44	08:10 (6)	06:36	06:18	05:16	04:49		05:27 (16)			
	16:38	17:42	5	08:15 (6)	18:38	20:38	21:35	22:10	20	05:47 (16)		
20	08:39	07:41	08:08 (6)	06:33	06:16	05:14	04:49		05:27 (16)			
	16:40	17:44	8	08:16 (6)	18:40	20:40	21:36	22:10	20	05:47 (16)		
21	08:38	07:39	08:05 (6)	06:31	06:13	05:13	04:49		05:28 (16)			
	16:42	17:46	11	08:16 (6)	18:42	20:42	21:38	22:11	20	05:48 (16)		
22	08:36	07:37	08:03 (6)	06:28	06:11	05:11	04:49		05:28 (16)			
	16:44	17:48	14	08:17 (6)	18:44	20:44	21:40	22:11	20	05:48 (16)		
23	08:35	07:35	08:00 (6)	06:25	06:50 (5)	06:09	05:10	04:49		05:28 (16)		
	16:46	17:50	16	08:16 (6)	18:46	3	06:53 (5)	20:46	21:41	22:11	20	05:48 (16)
24	08:33	07:32	07:59 (6)	06:23	06:47 (5)	06:06	05:08	04:50		05:28 (16)		
	16:48	17:52	17	08:16 (6)	18:48	6	06:53 (5)	20:48	21:43	22:11	20	05:48 (16)
25	08:32	07:30	07:59 (6)	06:20	06:44 (5)	06:04	05:07	04:50		05:29 (16)		
	16:50	17:54	16	08:15 (6)	18:50	9	06:53 (5)	20:50	21:44	22:11	20	05:49 (16)
26	08:30	07:28	08:00 (6)	06:18	06:42 (5)	06:02	05:05	04:51		05:29 (16)		
	16:52	17:56	15	08:15 (6)	18:52	12	06:54 (5)	20:52	21:46	22:11	19	05:48 (16)
27	08:29	07:25	08:01 (6)	06:15	06:39 (5)	05:59	05:04	04:51		05:30 (16)		
	16:54	17:58	13	08:14 (6)	18:54	14	06:53 (5)	20:54	21:47	22:11	19	05:49 (16)
28	08:27	07:23	08:02 (6)	06:13	06:38 (5)	05:57	05:03	04:52		05:29 (16)		
	16:56	18:00	10	08:12 (6)	18:56	15	06:53 (5)	20:56	21:49	22:11	20	05:49 (16)
29	08:26			07:10	07:37 (5)	05:55	05:02	04:52		05:30 (16)		
	16:58			19:58	14	07:51 (5)	20:58	21:50	22:10	19	05:49 (16)	
30	08:24			07:08	07:39 (5)	05:53	05:00	04:53		05:31 (16)		
	17:00			20:00	11	07:50 (5)	21:00	21:52	22:10	18	05:49 (16)	
31	08:22			07:05	07:40 (5)		04:59					
	17:02			20:01	7	07:47 (5)	21:53					
Potential sun hours	244	270	366		422	499		517				
Total, worst case			125		167			509				
Sun reduction			0,24		0,34			0,48				
Oper. time red.			1,00		1,00			1,00				
Wind dir. red.			0,93		0,99			0,79				
Total reduction			0,23		0,34			0,39				
Total, real			29		57			199				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December				
1	04:54	05:31 (16)	05:36	06:33	07:01 (2)	07:29	07:30	08:27		
	22:10	05:49 (16)	21:32	20:23	07:06 (2)	19:07	16:53	16:06		
2	04:54	05:31 (16)	05:37	06:35	07:03 (2)	07:31	08:08 (1)	07:32	08:29	
	22:09	05:49 (16)	21:30	20:20	07:06 (2)	19:04	08:16 (1)	16:51	16:05	
3	04:55	05:32 (16)	05:39	06:36	07:32	07:32	08:06 (1)	07:34	08:30	
	22:09	05:49 (16)	21:29	20:18	19:01	11	08:17 (1)	16:49	16:05	
4	04:56	05:33 (16)	05:41	06:38	07:34	07:34	08:05 (1)	07:36	08:32	
	22:08	05:49 (16)	21:27	20:15	18:59	13	08:18 (1)	16:47	16:04	
5	04:57	05:33 (16)	05:43	06:40	07:36	07:36	08:04 (1)	07:38	08:33	
	22:08	05:49 (16)	21:25	20:13	18:56	14	08:18 (1)	16:45	16:03	
6	04:58	05:33 (16)	05:45	06:42	07:38	07:38	08:06 (1)	07:40	08:35	
	22:07	05:48 (16)	21:23	20:10	18:54	11	08:17 (1)	16:43	16:03	
7	04:59	05:34 (16)	05:46	06:44	07:40	07:40	08:08 (1)	07:42	08:36	
	22:06	05:48 (16)	21:21	20:08	18:51	9	08:17 (1)	16:41	16:02	
8	05:00	05:35 (16)	05:48	06:46	07:42	07:42	08:10 (1)	07:44	08:38	
	22:06	05:47 (16)	21:18	20:05	18:49	6	08:16 (1)	16:39	16:02	
9	05:01	05:36 (16)	05:50	06:48	07:44	07:44	08:12 (1)	07:46	08:39	
	22:05	05:46 (16)	21:16	20:03	18:46	2	08:14 (1)	16:37	16:01	
10	05:02	05:37 (16)	05:52	06:49	07:46	07:46	07:48	07:48	08:40	
	22:04	05:45 (16)	21:14	20:00	18:44	11	08:17 (1)	16:35	16:01	
11	05:03	05:40 (16)	05:54	06:51	07:48	07:48	07:50	07:50	08:41	
	22:03	05:44 (16)	21:12	19:58	18:41	11	08:17 (1)	16:34	16:01	
12	05:05	05:46 (16)	05:55	06:53	07:33 (5)	07:50	07:52	07:52	08:43	
	22:02	21:10	19:55	6	07:39 (5)	18:39	16:32	16:00		
13	05:06	05:57	06:55	06:55	07:30 (5)	07:52	08:37 (6)	07:54	08:44	
	22:01	21:08	19:53	11	07:41 (5)	18:37	7	08:44 (6)	16:30	16:00
14	05:07	05:59	06:57	06:57	07:28 (5)	07:54	08:34 (6)	07:56	08:45	
	22:00	21:06	19:50	13	07:41 (5)	18:34	12	08:46 (6)	16:28	16:00
15	05:09	06:01	06:59	06:59	07:27 (5)	07:56	08:33 (6)	07:58	08:46	
	21:59	21:03	19:47	15	07:42 (5)	18:32	14	08:47 (6)	16:27	16:00
16	05:10	06:03	07:01	07:01	07:28 (5)	07:58	08:31 (6)	08:00	08:47	
	21:58	21:01	19:45	14	07:42 (5)	18:29	17	08:48 (6)	16:25	16:00
17	05:11	06:05	07:02	07:02	07:30 (5)	08:00	08:31 (6)	08:02	08:47	
	21:56	20:59	19:42	12	07:42 (5)	18:27	17	08:48 (6)	16:23	16:00
18	05:13	06:07	07:04	07:04	07:32 (5)	08:02	08:30 (6)	08:04	08:48	
	21:55	20:57	19:40	10	07:42 (5)	18:25	18	08:48 (6)	16:22	16:00
19	05:14	06:08	07:06	07:06	07:33 (5)	08:04	08:32 (6)	08:06	08:49	
	21:54	20:54	19:37	7	07:40 (5)	18:22	15	08:47 (6)	16:20	16:01
20	05:16	06:10	07:08	07:08	07:35 (5)	08:06	08:34 (6)	08:08	08:50	
	21:52	20:52	19:35	4	07:39 (5)	18:20	13	08:47 (6)	16:19	16:01
21	05:17	06:12	07:10	07:10	08:08	08:08	08:36 (6)	08:10	08:50	
	21:51	20:50	19:32	10	08:46 (6)	16:18	16:18	16:18	16:01	
22	05:19	06:14	07:12	07:12	08:10	08:10	08:39 (6)	08:12	08:51	
	21:49	20:47	19:30	7	08:46 (6)	16:16	16:16	16:16	16:02	
23	05:20	06:16	07:14	07:14	08:12	08:12	08:41 (6)	08:13	08:51	
	21:48	20:45	19:27	3	08:44 (6)	16:15	16:15	16:15	16:02	
24	05:22	06:18	07:16	07:16	08:14	08:14	08:15	08:15	08:52	
	21:46	20:42	19:24	18:11	16:14	16:03				
25	05:24	06:20	07:17	07:17	07:16	07:16	08:17	08:17	08:52	
	21:45	20:40	19:22	17:08	16:12	16:04				
26	05:25	06:22	07:19	07:19	07:18	07:18	08:19	08:19	08:52	
	21:43	20:38	19:19	17:06	16:11	16:04				
27	05:27	06:23	07:21	07:21	07:20	07:20	08:21	08:21	08:53	
	21:41	20:35	19:17	17:04	16:10	16:05				
28	05:29	06:25	07:23	07:23	07:22	07:22	08:22	08:22	08:53	
	21:40	20:33	19:14	17:02	16:09	16:06				
29	05:30	06:27	06:59 (2)	07:25	07:24	07:24	08:24	08:24	08:53	
	21:38	20:30	7	07:06 (2)	19:12	17:00	16:08	16:07		
30	05:32	06:29	06:58 (2)	07:27	07:26	07:26	08:26	08:26	08:53	
	21:36	20:28	9	07:07 (2)	19:09	16:57	16:07	16:08		
31	05:34	06:31	06:59 (2)	07:28	07:28	07:28	08:28	08:28	08:53	
	21:34	20:25	7	07:06 (2)	16:55	16:09				
Potential sun hours	519	464	383	327	254	227				
Total, worst case	148	23	100	207						
Sun reduction	0,49	0,52	0,40	0,31						
Oper. time red.	1,00	1,00	1,00	1,00						
Wind dir. red.	0,79	0,98	1,00	0,95						
Total reduction	0,39	0,51	0,40	0,30						
Total, real	58	12	40	61						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53	08:20	07:20	07:58 (6)	07:03	05:51
	16:10	17:04	18:02	11 08:09 (6)	20:03	21:54
2	08:53	08:19	07:18	08:00 (6)	07:00	05:48
	16:11	17:06	18:04	5 08:05 (6)	20:05	21:03
3	08:52	08:17	07:16	06:57	05:46	04:56
	16:13	17:08	18:06	20:07	21:05	21:57
4	08:52	08:15	07:13	06:55	05:44	04:55
	16:14	17:10	18:08	20:09	21:07	21:58
5	08:52	08:13	07:11	06:52	05:42	04:55
	16:15	17:12	18:10	20:11	21:09	21:59
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40
	16:17	17:14	18:12	3 07:36 (1)	20:13	21:11
7	08:51	08:09	07:06	07:30 (1)	06:47	05:38
	16:18	17:16	18:14	7 07:37 (1)	20:15	21:13
8	08:50	08:07	07:03	07:28 (1)	06:45	05:36
	16:19	17:18	18:16	10 07:38 (1)	20:17	21:15
9	08:50	08:05	07:01	07:25 (1)	06:42	05:34
	16:21	17:21	18:18	12 07:37 (1)	20:19	21:17
10	08:49	08:03	06:58	07:25 (1)	06:40	05:32
	16:22	17:23	18:20	12 07:37 (1)	20:21	21:19
11	08:48	08:01	06:56	07:25 (1)	06:37	05:30
	16:24	17:25	18:22	11 07:36 (1)	20:23	21:20
12	08:47	07:59	06:53	07:26 (1)	06:35	05:28
	16:26	17:27	18:24	9 07:35 (1)	20:25	21:22
13	08:46	07:57	06:51	07:28 (1)	06:33	05:26
	16:27	17:29	18:26	3 07:31 (1)	20:27	21:24
14	08:46	07:55	06:48	06:30	05:24	04:50
	16:29	17:31	18:28	20:29	21:26	22:07
15	08:45	07:53	06:46	06:28	05:23	04:49
	16:31	17:33	18:30	20:31	21:28	22:08
16	08:44	07:50	06:43	06:25	05:21	04:49
	16:33	17:35	18:32	20:33	21:29	22:09
17	08:42	07:48	06:41	06:23	05:19	04:49
	16:34	17:37	18:34	20:34	21:31	22:09
18	08:41	07:46	06:38	06:20	05:17	04:49
	16:36	17:39	18:36	20:36	21:33	22:10
19	08:40	07:44	06:36	06:18	05:16	04:49
	16:38	17:42	18:38	20:38	21:35	22:10
20	08:39	07:41	08:08 (6)	06:33	06:16	05:14
	16:40	17:44	2 08:10 (6)	18:40	20:40	21:36
21	08:38	07:39	08:05 (6)	06:31	06:13	05:13
	16:42	17:46	6 08:11 (6)	18:42	20:42	21:38
22	08:36	07:37	08:03 (6)	06:28	06:11	05:11
	16:44	17:48	9 08:12 (6)	18:44	20:44	21:40
23	08:35	07:35	08:00 (6)	06:25	06:09	05:10
	16:46	17:50	12 08:12 (6)	18:46	20:46	21:41
24	08:33	07:32	07:58 (6)	06:23	06:47 (5)	06:06
	16:48	17:52	15 08:13 (6)	18:48	4 06:51 (5)	20:48
25	08:32	07:30	07:55 (6)	06:20	06:44 (5)	06:04
	16:50	17:54	17 08:12 (6)	18:50	7 06:51 (5)	20:50
26	08:30	07:28	07:55 (6)	06:18	06:42 (5)	06:02
	16:52	17:56	17 08:12 (6)	18:52	10 06:52 (5)	20:52
27	08:29	07:25	07:56 (6)	06:15	06:39 (5)	05:59
	16:54	17:58	16 08:12 (6)	18:54	12 06:51 (5)	20:54
28	08:27	07:23	07:56 (6)	06:13	06:37 (5)	05:57
	16:56	18:00	14 08:10 (6)	18:56	14 06:51 (5)	20:56
29	08:26		07:10	07:36 (5)	05:55	05:02
	16:58		19:58	14 07:50 (5)	20:58	21:50
30	08:24		07:08	07:37 (5)	05:53	05:00
	17:00		20:00	12 07:49 (5)	21:00	21:52
31	08:22		07:05	07:38 (5)		04:59
	17:02		20:01	8 07:46 (5)		21:53
Potential sun hours	244	270	366	422	499	517
Total, worst case		108	164		5	552
Sun reduction		0,24	0,34		0,52	0,48
Oper. time red.		1,00	1,00		1,00	1,00
Wind dir. red.		0,94	0,99		0,79	0,79
Total reduction		0,23	0,34		0,42	0,39
Total, real		25	56		2	216

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December					
1	04:54	05:31 (16)	05:36	06:33	07:01 (2)	07:29	08:06 (1)	07:30	08:27		
2	22:10	05:50 (16)	21:32	20:23	07:06 (2)	19:07	7	08:13 (1)	16:53	16:06	
2	04:54	05:32 (16)	05:37	06:35	07:03 (2)	07:31	08:04 (1)	07:32	08:29		
	22:09	05:51 (16)	21:30	20:20	07:05 (2)	19:04	11	08:15 (1)	16:51	16:05	
3	04:55	05:32 (16)	05:39	06:36		07:32		08:03 (1)	07:34	08:30	
	22:09	05:51 (16)	21:29	20:18		19:01	12	08:15 (1)	16:49	16:05	
4	04:56	05:33 (16)	05:41	06:38		07:34		08:02 (1)	07:36	08:32	
	22:08	05:51 (16)	21:27	20:15		18:59	13	08:15 (1)	16:47	16:04	
5	04:57	05:34 (16)	05:43	06:40		07:36		08:04 (1)	07:38	08:34	
	22:08	05:51 (16)	21:25	20:13		18:56	11	08:15 (1)	16:45	16:03	
6	04:58	05:33 (16)	05:45	06:42		07:38		08:06 (1)	07:40	08:35	
	22:07	05:50 (16)	21:23	20:10		18:54	8	08:14 (1)	16:43	16:03	
7	04:59	05:34 (16)	05:46	06:44		07:40		08:08 (1)	07:42	08:36	
	22:06	05:50 (16)	21:21	20:08		18:51	5	08:13 (1)	16:41	16:02	
8	05:00	05:35 (16)	05:48	06:46		07:42		08:10 (1)	07:44	08:38	
	22:06	05:49 (16)	21:18	20:05		18:49	1	08:11 (1)	16:39	16:02	
9	05:01	05:35 (16)	05:50	06:48		07:44		07:46	08:39		
	22:05	05:49 (16)	21:16	20:03		18:46		16:37	16:01		
10	05:02	05:36 (16)	05:52	06:49		07:46		07:48	08:40		
	22:04	05:48 (16)	21:14	20:00		18:44		16:35	16:01		
11	05:03	05:38 (16)	05:54	06:51		07:48		07:50	08:41		
	22:03	05:48 (16)	21:12	19:58		18:41		16:34	16:01		
12	05:05	05:40 (16)	05:55	06:53	07:30 (5)	07:50	08:33 (6)	07:52	08:43		
	22:02	05:47 (16)	21:10	19:55	8	07:38 (5)	18:39	8	08:41 (6)	16:32	16:00
13	05:06		05:57	06:55		07:52		08:30 (6)	07:54	08:44	
	22:01		21:08	19:53	12	07:40 (5)	18:37	13	08:43 (6)	16:30	16:00
14	05:07		05:59	06:57		07:54		08:29 (6)	07:56	08:45	
	22:00		21:06	19:50	14	07:40 (5)	18:34	15	08:44 (6)	16:28	16:00
15	05:09		06:01	06:59		07:56		08:28 (6)	07:58	08:46	
	21:59		21:03	19:47	14	07:40 (5)	18:32	16	08:44 (6)	16:27	16:00
16	05:10		06:03	07:01		07:58		08:27 (6)	08:00	08:47	
	21:58		21:01	19:45	12	07:40 (5)	18:29	17	08:44 (6)	16:25	16:00
17	05:11		06:05	07:02		08:00		08:28 (6)	08:02	08:47	
	21:56		20:59	19:42	10	07:40 (5)	18:27	16	08:44 (6)	16:23	16:00
18	05:13		06:07	07:04		08:02		08:30 (6)	08:04	08:48	
	21:55		20:57	19:40	7	07:39 (5)	18:25	14	08:44 (6)	16:22	16:00
19	05:14		06:08	07:06		08:04		08:32 (6)	08:06	08:49	
	21:54		20:54	19:37	4	07:37 (5)	18:22	11	08:43 (6)	16:20	16:01
20	05:16		06:10	07:08		08:06		08:34 (6)	08:08	08:50	
	21:52		20:52	19:35	1	07:36 (5)	18:20	8	08:42 (6)	16:19	16:01
21	05:17		06:12	07:10		08:08		08:36 (6)	08:10	08:50	
	21:51		20:50	19:32		18:18	5	08:41 (6)	16:18	16:01	
22	05:19		06:14	07:12		08:10		08:39 (6)	08:12	08:51	
	21:49		20:47	19:30		18:15	1	08:40 (6)	16:16	16:02	
23	05:20		06:16	07:14		08:12		08:13	08:51		
	21:48		20:45	19:27		18:13		16:15	16:02		
24	05:22		06:18	07:16		08:14		08:15	08:52		
	21:46		20:42	19:24		18:11		16:14	16:03		
25	05:24		06:20	07:17		07:16		08:17	08:52		
	21:45		20:40	19:22		17:08		16:12	16:04		
26	05:25		06:22	07:19		07:18		08:19	08:52		
	21:43		20:38	19:19		17:06		16:11	16:04		
27	05:27		06:23	07:21		07:20		08:21	08:53		
	21:41		20:35	19:17		17:04		16:10	16:05		
28	05:29		06:25	07:23		07:22		08:22	08:53		
	21:40		20:33	19:14		17:02		16:09	16:06		
29	05:30		06:27	06:58 (2)	07:25	07:24		08:24	08:53		
	21:38		20:30	7	07:05 (2)	19:12		17:00	16:08	16:07	
30	05:32		06:29	06:58 (2)	07:27	07:26		08:26	08:53		
	21:36		20:28	8	07:06 (2)	19:09		16:07	16:08		
31	05:34		06:31	06:59 (2)		07:28			08:53		
	21:34		20:25	7	07:06 (2)	16:55			16:09		
Potential sun hours	519	464		383		327		254	227		
Total, worst case	182		22		89		192				
Sun reduction	0,49		0,52		0,40		0,31				
Oper. time red.	1,00		1,00		1,00		1,00				
Wind dir. red.	0,79		0,98		1,00		0,95				
Total reduction	0,39		0,51		0,40		0,30				
Total, real	72		11		36		57				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	07:29 (5) 21:02	05:51 21:54	04:58 22:10	04:54 21:32	05:36 20:23	06:33 19:07	07:29 19:07	07:56 (1) 16:53	07:30 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	07:29 (5) 21:03	05:48 21:56	04:57 22:09	04:54 21:30	05:37 20:20	06:35 19:04	07:31 19:04	07:58 (1) 16:51	07:32 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:41 (6) 21:05	05:46 21:57	04:56 22:09	04:55 21:29	05:39 20:18	06:36 19:01	07:33 19:01	08:01 (1) 16:51	07:34 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	07:38 (6) 21:07	05:44 21:58	04:55 22:08	04:56 21:27	05:41 20:15	06:38 18:59	07:34 18:59	07:58 (1) 16:47	08:32 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	07:36 (6) 21:09	05:42 21:59	04:55 22:08	04:57 21:25	05:43 20:13	06:40 18:56	07:36 18:56	08:15 (6) 16:45	07:38 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	07:37 (6) 21:11	05:40 22:00	04:54 22:07	04:55 21:23	05:45 20:10	06:42 18:54	07:38 18:54	08:15 (6) 16:43	07:40 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	07:49 (6) 21:13	05:38 22:01	04:53 22:06	04:59 21:21	05:46 20:08	06:44 18:51	07:40 18:51	08:13 (6) 16:41	07:42 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	07:48 (6) 21:15	05:36 22:02	04:52 22:06	05:00 21:18	05:48 20:05	06:46 18:49	07:42 18:49	08:12 (6) 16:39	07:44 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	07:44 (6) 21:17	05:34 22:03	04:52 22:05	05:01 21:16	05:50 20:03	06:48 18:46	07:44 18:46	08:12 (6) 16:37	07:46 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	08:49 21:19	05:32 22:04	04:51 22:04	05:02 21:14	05:52 20:00	06:49 18:44	07:46 18:44	08:14 (6) 16:35	07:48 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:20 (1) 21:20	05:30 22:05	04:51 22:03	05:03 21:12	05:54 19:58	06:51 18:42	07:21 (5) 18:42	08:16 (6) 16:34	07:50 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:18 (1) 21:22	05:28 22:06	04:50 22:02	05:05 21:10	05:56 19:55	06:53 18:39	07:21 (5) 18:39	08:25 (6) 16:32	07:52 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	07:15 (1) 21:24	05:26 22:07	04:50 22:01	05:06 21:08	05:57 19:53	06:55 18:37	07:23 (5) 18:37	08:25 (6) 16:30	07:54 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	07:13 (1) 21:26	05:24 22:07	04:50 22:00	05:07 21:06	05:59 19:50	06:57 18:34	07:24 (5) 18:34	08:24 (6) 16:30	07:56 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	07:11 (1) 21:28	05:23 22:08	04:49 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:26 (5) 18:32	08:24 (6) 16:30	07:58 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	07:12 (1) 21:29	05:21 22:09	04:49 21:58	06:03 21:01	07:01 19:45	07:58 18:29	07:28 (5) 18:29	08:20 (6) 16:25	07:58 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	07:14 (1) 21:31	05:19 22:09	04:49 21:56	06:05 20:59	07:02 19:42	08:00 18:27	07:30 (5) 18:27	08:20 (6) 16:23	08:00 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	07:17 (1) 21:33	05:17 22:10	04:49 21:55	06:07 20:57	07:04 19:40	08:02 18:25	07:31 (5) 18:25	08:24 (6) 16:22	08:04 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	07:18 (1) 21:35	05:16 22:10	04:49 21:54	06:14 20:54	07:06 19:37	08:04 18:22	07:31 (5) 18:22	08:25 (6) 16:20	08:06 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	07:20 (1) 21:36	05:14 22:10	04:49 21:52	06:10 20:52	07:08 19:35	08:06 18:20	07:32 (5) 18:20	08:26 (6) 16:19	08:08 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	07:22 (1) 21:38	05:13 22:11	04:49 21:51	06:12 20:50	07:10 19:32	08:08 18:18	07:33 (5) 18:18	08:27 (6) 16:18	08:10 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	07:24 (1) 21:40	05:11 22:11	04:49 21:49	06:14 20:47	07:12 19:30	08:10 18:15	07:34 (5) 18:15	08:28 (6) 16:16	08:12 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	07:26 (1) 21:41	05:10 22:11	04:49 21:48	06:16 20:45	07:14 19:27	08:12 18:13	07:35 (5) 18:13	08:30 (6) 16:15	08:13 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	07:28 (1) 21:43	05:08 22:11	04:50 21:46	06:18 20:42	07:16 19:24	08:14 18:11	07:36 (5) 18:11	08:33 (6) 16:14	08:15 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	07:30 (1) 21:44	05:07 22:11	04:50 21:45	06:20 20:40	07:17 19:22	08:16 18:08	07:37 (5) 18:08	08:36 (6) 16:12	08:17 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	07:32 (1) 21:46	05:05 22:11	04:51 21:43	06:22 20:38	07:19 19:19	08:18 18:00	07:38 (5) 18:00	08:39 (6) 16:11	08:19 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	07:34 (1) 21:47	05:04 22:11	04:51 21:41	06:23 20:35	07:21 19:17	08:21 18:00	07:39 (5) 18:00	08:41 (6) 16:10	08:21 16:05
28	08:27 16:56	07:23 18:00	07:48 (6) 18:56	05:57 20:56	07:36 (1) 21:49	05:03 22:11	04:52 21:40	06:25 20:33	07:23 19:14	08:22 18:00	07:40 (5) 18:00	08:43 (6) 16:10	08:22 16:05
29	08:26 16:58	07:21 18:02	07:50 (6) 18:56	05:55 20:58	07:38 (1) 21:50	05:02 22:10	04:52 21:38	06:27 20:30	07:25 19:12	08:24 18:00	07:41 (5) 18:00	08:45 (6) 16:10	08:24 16:07
30	08:24 17:00	07:19 18:03	07:58 (6) 19:00	05:53 21:00	07:40 (1) 21:52	05:00 22:10	04:53 21:36	06:29 20:28	07:27 19:09	08:26 18:00	07:42 (5) 18:00	08:47 (6) 16:07	08:26 16:08
31	08:22 17:02	07:17 18:05	07:59 (6) 19:01	05:51 21:00	07:42 (1) 21:53	04:59 22:10	05:34 21:34	06:31 20:25	07:28 18:55	08:28 18:00	07:43 (5) 18:00	08:49 (6) 16:09	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227	
Total, worst case			150			17			84		88		
Sun reduction		0,24				0,39			0,40		0,31		
Oper. time red.		1,00				1,00			1,00		1,00		
Wind dir. red.		0,96				0,98			1,00		0,97		
Total reduction		0,24				0,39			0,39		0,30		
Total, real		0		50		7			33		26		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: G - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (7)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, shadow reduction, and operational time. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June									
1	08:53	08:20	07:20	17:11 (5)	07:02	05:50	20:00 (18)	04:58	20:39 (15)						
	16:10	17:04	18:02	21	17:32 (5)	20:03	21:01	25	20:25 (18)	21:54	30	21:09 (14)			
2	08:53	08:19	16:29 (1)	07:18	17:12 (5)	07:00	05:48	20:00 (18)	04:57	20:39 (15)					
	16:11	17:06	4	16:33 (6)	18:04	20	17:32 (5)	20:05	21:03	25	20:25 (18)	21:56	30	21:09 (14)	
3	08:52	08:17	16:27 (1)	07:15	17:11 (5)	06:57	05:46	19:59 (18)	04:56	20:39 (15)					
	16:13	17:08	8	16:35 (6)	18:06	20	17:31 (5)	20:07	21:05	26	20:25 (18)	21:57	30	21:09 (14)	
4	08:52	08:15	16:27 (1)	07:13	17:12 (5)	06:55	05:44	19:59 (18)	04:55	20:39 (15)					
	16:14	17:10	10	16:37 (6)	18:08	19	17:31 (5)	20:09	21:07	26	20:25 (18)	21:58	31	21:10 (14)	
5	08:52	08:13	16:26 (1)	07:11	17:13 (5)	06:52	05:42	19:59 (18)	04:54	20:39 (15)					
	16:15	17:12	14	16:40 (6)	18:10	16	17:29 (5)	20:11	21:09	26	20:25 (18)	21:59	30	21:10 (14)	
6	08:51	08:11	16:26 (1)	07:08	17:14 (5)	06:50	05:40	19:59 (18)	04:54	20:39 (15)					
	16:16	17:14	16	16:42 (6)	18:12	14	17:28 (5)	20:13	21:11	25	20:24 (18)	22:00	30	21:09 (14)	
7	08:51	08:09	16:26 (1)	07:06	17:16 (5)	06:47	05:38	19:59 (18)	04:53	20:39 (15)					
	16:18	17:16	19	16:45 (6)	18:14	9	17:25 (5)	20:15	21:13	25	20:24 (18)	22:01	31	21:10 (14)	
8	08:50	08:07	16:26 (1)	07:03		06:45	05:36	19:59 (18)	04:52	20:39 (15)					
	16:19	17:18	18	16:44 (6)	18:16		20:17	21:15	24	20:23 (18)	22:02	31	21:10 (14)		
9	08:49	08:05	16:27 (1)	07:01		06:42	05:34	20:00 (18)	04:52	20:40 (15)					
	16:21	17:20	17	16:44 (6)	18:18		20:19	21:17	22	20:22 (18)	22:03	30	21:10 (14)		
10	08:49	08:03	16:26 (1)	06:58		06:40		18:47 (2)	05:32	20:01 (18)	04:51	20:39 (15)			
	16:22	17:23	15	16:41 (6)	18:20		20:21	1	18:48 (2)	21:18	22	20:23 (18)	22:04	31	21:10 (14)
11	08:48	08:01	16:27 (1)	06:56		06:37		18:48 (2)	05:30	20:02 (18)	04:51	20:40 (15)			
	16:24	17:25	13	16:40 (1)	18:22		20:23	1	18:49 (2)	21:20	19	20:21 (18)	22:05	30	21:10 (14)
12	08:47	07:59	16:29 (1)	06:53		06:35		18:49 (2)	05:28	20:02 (18)	04:50	20:40 (15)			
	16:26	17:27	10	16:39 (1)	18:24		20:25	1	18:50 (2)	21:22	18	20:20 (18)	22:06	30	21:10 (14)
13	08:46	07:57	16:31 (1)	06:51		06:32		18:51 (2)	05:26	20:03 (18)	04:50	20:41 (15)			
	16:27	17:29	7	16:38 (1)	18:26		20:27	1	18:52 (2)	21:24	16	20:19 (18)	22:07	30	21:11 (14)
14	08:45	07:55		06:48		06:30		18:55 (2)	05:24	20:06 (18)	04:49	20:40 (15)			
	16:29	17:31		18:28		20:29	1	18:56 (2)	21:26	12	20:18 (18)	22:07	30	21:10 (14)	
15	08:44	07:52		06:46		06:28			05:22	20:08 (18)	04:49	20:40 (15)			
	16:31	17:33		18:30		20:30			21:28	7	20:15 (18)	22:08	30	21:10 (14)	
16	08:43	07:50		06:43		06:25			05:21		04:49	20:41 (15)			
	16:32	17:35		18:32		20:32			21:29		22:08	30	21:11 (14)		
17	08:42	07:48		06:41		06:23			05:19		04:49	20:41 (15)			
	16:34	17:37		18:34		20:34			21:31		22:09	30	21:11 (14)		
18	08:41	07:46		06:38		06:20			05:17		04:49	20:41 (15)			
	16:36	17:39		18:36		20:36			21:33		22:09	30	21:11 (14)		
19	08:40	07:44		06:35		06:18			05:16		20:53 (14)	04:49	20:41 (15)		
	16:38	17:41		18:38		20:38			21:34	7	21:00 (14)	22:10	30	21:11 (14)	
20	08:39	07:41		06:33		06:15			05:14		20:51 (14)	04:49	20:41 (15)		
	16:40	17:43		18:40		20:40			21:36	11	21:02 (14)	22:10	30	21:11 (14)	
21	08:37	07:39		06:30		06:13			05:12		20:47 (15)	04:49	20:41 (15)		
	16:42	17:46		18:42		20:42			21:38	16	21:03 (14)	22:10	30	21:11 (14)	
22	08:36	07:37		06:28		06:11			05:11		20:45 (15)	04:49	20:42 (15)		
	16:44	17:48		18:44		20:44			21:39	19	21:04 (14)	22:11	30	21:12 (14)	
23	08:35	07:34		17:18 (5)	06:25		06:08		20:11 (17)	05:09	20:44 (15)	04:49	20:42 (15)		
	16:45	17:50	3	17:21 (5)	18:46		20:46	6	20:17 (17)	21:41	22	21:06 (14)	22:11	30	21:12 (14)
24	08:33	07:32		17:16 (5)	06:23		06:06		20:09 (17)	05:08	20:42 (15)	04:50	20:42 (15)		
	16:47	17:52	7	17:23 (5)	18:48		20:48	10	20:19 (17)	21:43	24	21:06 (14)	22:11	30	21:12 (14)
25	08:32	07:30		17:14 (5)	06:20		06:04		20:06 (18)	05:07	20:42 (15)	04:50	20:43 (15)		
	16:49	17:54	11	17:25 (5)	18:50		20:50	14	20:20 (17)	21:44	24	21:06 (14)	22:11	30	21:13 (14)
26	08:30	07:27		17:13 (5)	06:18		06:02		20:05 (18)	05:05	20:41 (15)	04:50	20:43 (15)		
	16:51	17:56	15	17:28 (5)	18:52		20:52	17	20:22 (17)	21:46	26	21:07 (14)	22:11	30	21:13 (14)
27	08:29	07:25		17:12 (5)	06:15		05:59		20:03 (18)	05:04	20:41 (15)	04:51	20:44 (15)		
	16:53	17:58	17	17:29 (5)	18:54		20:54	20	20:23 (17)	21:47	27	21:08 (14)	22:11	29	21:13 (14)
28	08:27	07:23		17:12 (5)	06:13		05:57		20:02 (18)	05:03	20:40 (15)	04:51	20:43 (15)		
	16:55	18:00	20	17:32 (5)	18:56		20:56	22	20:24 (17)	21:49	28	21:08 (14)	22:11	30	21:13 (14)
29	08:25			07:10		05:55		20:01 (18)	05:01		20:40 (15)	04:52	20:44 (15)		
	16:57			19:57		20:58	24	20:25 (17)	21:50	28	21:08 (14)	22:10	30	21:14 (14)	
30	08:24			07:07		05:53		20:01 (18)	05:00		20:40 (15)	04:53	20:43 (15)		
	17:00			19:59		21:00	24	20:25 (18)	21:52	29	21:09 (14)	22:10	31	21:14 (14)	
31	08:22			07:05					04:59		20:39 (15)				
	17:02			20:01					21:53	30	21:09 (14)				
Potential sun hours	244	270	366	422	499	517									
Total, worst case		224	119	142	609	904									
Sun reduction		0,24	0,34	0,39	0,52	0,48									
Oper. time red.		1,00	1,00	1,00	1,00	1,00									
Wind dir. red.		0,85	0,93	0,96	0,92	0,87									
Total reduction		0,21	0,32	0,38	0,47	0,42									
Total, real		46	38	53	288	381									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December									
1	04:53	20:44 (15)	05:35	20:12 (18)	06:33	18:47 (2)	07:29	07:30	15:56 (1)	08:27					
	22:10	30	21:14 (14)	21:32	19	20:31 (18)	20:23	19:10 (2)	19:06	16:53	15	16:11 (6)	16:06		
2	04:54	20:44 (15)	05:37	20:12 (18)	06:34	18:46 (2)	07:30	07:32	15:55 (1)	08:29					
	22:09	31	21:15 (14)	21:30	20	20:32 (18)	20:20	19:11 (2)	19:04	16:51	17	16:12 (6)	16:05		
3	04:55	20:45 (15)	05:39	20:11 (18)	06:36	18:44 (2)	07:32	07:34	15:56 (1)	08:30					
	22:09	30	21:15 (14)	21:28	22	20:33 (18)	20:18	19:11 (2)	19:01	16:49	18	16:14 (6)	16:04		
4	04:56	20:44 (15)	05:41	20:10 (18)	06:38	18:43 (2)	07:34	07:36	15:56 (1)	08:32					
	22:08	31	21:15 (14)	21:26	23	20:33 (18)	20:15	19:12 (2)	18:59	16:47	18	16:14 (6)	16:04		
5	04:57	20:45 (15)	05:43	20:10 (18)	06:40	18:42 (2)	07:36	07:38	15:56 (1)	08:33					
	22:08	30	21:15 (14)	21:24	24	20:34 (18)	20:13	19:12 (2)	18:56	16:45	16	16:12 (6)	16:03		
6	04:58	20:45 (15)	05:44	20:09 (18)	06:42	18:42 (2)	07:38	07:40	15:56 (1)	08:35					
	22:07	31	21:16 (14)	21:22	25	20:34 (18)	20:10	19:12 (2)	18:54	5	17:55 (5)	07:40	15:56 (1)	08:35	
7	04:59	20:45 (15)	05:46	20:08 (18)	06:44	18:42 (2)	07:40	07:42	15:57 (1)	08:36					
	22:06	31	21:16 (14)	21:20	26	20:34 (18)	20:08	19:12 (2)	18:51	11	18:03 (5)	16:41	11	16:08 (6)	16:02
8	05:00	20:46 (15)	05:48	20:08 (18)	06:46	18:40 (2)	07:42	07:44	15:58 (1)	08:38					
	22:06	30	21:16 (14)	21:18	26	20:34 (18)	20:05	19:11 (2)	18:49	15	18:04 (5)	16:39	8	16:06 (6)	16:01
9	05:01	20:46 (15)	05:50	20:09 (18)	06:47	18:40 (2)	07:44	07:46	16:00 (1)	08:39					
	22:05	30	21:16 (14)	21:16	25	20:34 (18)	20:03	19:11 (2)	18:46	17	18:04 (5)	16:37	3	16:03 (6)	16:01
10	05:02	20:46 (15)	05:52	20:08 (18)	06:49	18:40 (2)	07:46	07:48	16:01	08:40					
	22:04	30	21:16 (14)	21:14	25	20:33 (18)	20:00	19:10 (2)	18:44	19	18:06 (5)	16:35		16:01	
11	05:03	20:46 (15)	05:54	20:08 (18)	06:51	18:41 (2)	07:48	07:50	16:01	08:41					
	22:03	30	21:16 (14)	21:12	25	20:33 (18)	19:58	19:10 (2)	18:41	20	18:06 (5)	16:33		16:00	
12	05:04	20:48 (15)	05:55	20:09 (18)	06:53	18:41 (2)	07:50	07:52	16:00	08:42					
	22:02	29	21:17 (14)	21:10	24	20:33 (18)	19:55	19:09 (2)	18:39	20	18:06 (5)	16:32		16:00	
13	05:06	20:48 (15)	05:57	20:09 (18)	06:55	18:41 (2)	07:52	07:54	16:00	08:44					
	22:01	29	21:17 (14)	21:08	24	20:33 (18)	19:52	19:07 (2)	18:36	21	18:06 (5)	16:30		16:00	
14	05:07	20:48 (15)	05:59	20:09 (18)	06:57	18:42 (2)	07:54	07:56	16:00	08:45					
	22:00	29	21:17 (14)	21:05	23	20:32 (17)	19:50	19:06 (2)	18:34	19	18:04 (5)	16:28		16:00	
15	05:08	20:49 (15)	06:01	20:10 (18)	06:59	18:43 (2)	07:56	07:58	16:00	08:46					
	21:59	28	21:17 (14)	21:03	22	20:32 (17)	19:47	19:04 (2)	18:32	16	18:01 (5)	16:27		16:00	
16	05:10	20:50 (15)	06:03	20:11 (18)	07:00	18:45 (2)	07:57	08:00	16:00	08:47					
	21:57	27	21:17 (14)	21:01	20	20:31 (17)	19:45	19:02 (2)	18:29	13	17:59 (5)	16:25		16:00	
17	05:11	20:50 (15)	06:05	20:11 (18)	07:02	18:47 (2)	07:59	08:02	16:00	08:47					
	21:56	27	21:17 (14)	20:59	17	20:28 (17)	19:42	18:59 (2)	18:27	10	17:56 (5)	16:23		16:00	
18	05:13	20:51 (15)	06:06	20:13 (17)	07:04		08:01	08:04	16:00	08:48					
	21:55	25	21:16 (14)	20:56	13	20:26 (17)	19:40	18:24	6	17:54 (5)	16:22		16:00		
19	05:14	20:52 (15)	06:08	20:15 (17)	07:06		08:03	08:06	16:00	08:49					
	21:54	24	21:16 (14)	20:54	9	20:24 (17)	19:37	18:22	1	17:51 (5)	16:20		16:01		
20	05:16	20:53 (15)	06:10	20:17 (17)	07:08		08:05	08:08	16:00	08:50					
	21:52	23	21:16 (14)	20:52	5	20:22 (17)	19:35	18:20		16:19	16:01				
21	05:17	20:54 (15)	06:12		07:10		08:07	08:10	16:00	08:50					
	21:51	21	21:15 (14)	20:49		19:32	18:17	16:17		16:01					
22	05:19	20:56 (15)	06:14		07:12		08:09	08:11		08:51					
	21:49	18	21:14 (14)	20:47		19:29	18:15	16:16		16:02					
23	05:20	20:59 (15)	06:16		07:14		08:11	08:13		08:51					
	21:48	14	21:13 (14)	20:45		19:27	18:13	16:15		16:02					
24	05:22	21:02 (14)	06:18		07:15		08:13	08:15		08:52					
	21:46	10	21:12 (14)	20:42		19:24	18:10	16:13		16:03					
25	05:23	21:05 (14)	06:20		07:17		07:15	08:17		08:52					
	21:45	3	21:08 (14)	20:40		19:22	17:08	16:12		16:03					
26	05:25		06:21		07:19		07:17	08:19		08:52					
	21:43		20:37		19:19		17:06	16:11		16:04					
27	05:27		06:23		07:21		07:19	08:20		08:53					
	21:41		20:35		19:17		17:04	16:10		16:05					
28	05:28		06:25		07:23		07:21	08:22		08:53					
	21:39		20:33		19:14		17:02	16:09		16:06					
29	05:30	20:17 (18)	06:27	18:55 (2)	07:25		07:24	16:00 (1)	08:24	08:53					
	21:38	9	20:26 (18)	20:30	11	19:06 (2)	19:11	16:59	8	16:08 (1)	16:08		16:07		
30	05:32	20:15 (18)	06:29	18:51 (2)	07:27		07:26	15:58 (1)	08:26	08:53					
	21:36	14	20:29 (18)	20:28	16	19:07 (2)	19:09	16:57	11	16:09 (1)	16:07		16:08		
31	05:34	20:14 (18)	06:31	18:49 (2)			07:28	15:57 (1)		08:53					
	21:34	17	20:31 (18)	20:25	20	19:09 (2)		16:55	13	16:10 (1)		16:09			
Potential sun hours	519		464		383		327		254		227				
Total, worst case	681		464		443		225		119						
Sun reduction	0,49		0,52		0,40		0,31		0,16						
Oper. time red.	1,00		1,00		1,00		1,00		1,00						
Wind dir. red.	0,88		0,96		1,00		0,91		0,81						
Total reduction	0,43		0,49		0,39		0,28		0,13						
Total, real	290		229		175		63		15						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: I - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 13 columns for months (January to December) and rows for each day (1-31) showing sun rise/set times, shadow start/end times, and reduction factors. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March		April	May	June	
1	08:53	08:20	07:20		07:03	05:51	04:58	
	16:10	17:04	18:02		20:03	21:02	21:54	
2	08:53	08:19	07:18		07:00	05:48	04:57	
	16:11	17:06	18:04		20:05	21:04	21:56	
3	08:52	08:17	07:16		06:58	05:46	04:56	
	16:13	17:08	18:06		20:07	21:05	21:57	
4	08:52	08:15	07:13		06:55	05:44	04:55	
	16:14	17:10	18:08		20:09	21:07	21:58	
5	08:52	08:13	07:11	07:36 (6)	06:52	05:42	04:55	
	16:15	17:12	18:10	1	07:37 (6)	20:11	21:09	21:59
6	08:51	08:11	07:08	07:33 (6)	06:50	05:40	04:54	
	16:17	17:14	18:12	4	07:37 (6)	20:13	21:11	22:00
7	08:51	08:09	07:06	07:31 (6)	06:47	05:38	04:53	
	16:18	17:16	18:14	7	07:38 (6)	20:15	21:13	22:01
8	08:50	08:07	07:03	07:28 (6)	06:45	05:36	04:52	
	16:19	17:18	18:16	9	07:37 (6)	20:17	21:15	22:02
9	08:50	08:05	07:01	07:25 (6)	06:42	05:34	04:52	
	16:21	17:21	18:18	11	07:36 (6)	20:19	21:17	22:03
10	08:49	08:03	06:58	07:24 (6)	06:40	05:32	04:51	
	16:23	17:23	18:20	11	07:35 (6)	20:21	21:19	22:04
11	08:48	08:01	06:56	07:25 (6)	06:37	05:30	04:51	
	16:24	17:25	18:22	8	07:33 (6)	20:23	21:20	22:05
12	08:47	07:59	06:53		06:35	05:28	04:50	05:25 (15)
	16:26	17:27	18:24		20:25	21:22	22:06	4 05:29 (15)
13	08:46	07:57	06:51		06:33	05:26	04:50	05:24 (15)
	16:27	17:29	18:26		20:27	21:24	22:07	6 05:30 (15)
14	08:46	07:55	06:48		06:30	05:24	04:50	05:24 (15)
	16:29	17:31	18:28		20:29	21:26	22:07	8 05:32 (15)
15	08:45	07:53	06:46	07:10 (1)	06:28	05:23	04:49	05:23 (15)
	16:31	17:33	18:30	2	07:12 (1)	20:31	21:28	8 05:31 (15)
16	08:44	07:50	06:43	07:08 (1)	06:25	05:21	04:49	05:23 (15)
	16:33	17:35	18:32	5	07:13 (1)	20:33	21:29	9 05:32 (15)
17	08:42	07:48	06:41	07:05 (1)	06:23	05:19	04:49	05:23 (15)
	16:34	17:37	18:34	7	07:12 (1)	20:35	21:31	10 05:33 (15)
18	08:41	07:46	06:38	07:02 (1)	06:20	05:17	04:49	05:23 (15)
	16:36	17:39	18:36	9	07:11 (1)	20:36	21:33	10 05:33 (15)
19	08:40	07:44	06:36	07:04 (1)	06:18	05:16	04:49	05:23 (15)
	16:38	17:42	18:38	5	07:09 (1)	20:38	21:35	10 05:33 (15)
20	08:39	07:42	06:33		06:16	05:14	04:49	05:23 (15)
	16:40	17:44	18:40		20:40	21:36	22:10	11 05:34 (15)
21	08:38	07:39	06:31		06:13	05:13	04:49	05:24 (15)
	16:42	17:46	18:42		20:42	21:38	22:11	11 05:35 (15)
22	08:36	07:37	06:28		06:11	05:11	04:49	05:24 (15)
	16:44	17:48	18:44		20:44	21:40	22:11	11 05:35 (15)
23	08:35	07:35	06:25		06:09	05:10	04:49	05:24 (15)
	16:46	17:50	18:46		20:46	21:41	22:11	10 05:34 (15)
24	08:33	07:32	06:23		06:06	05:08	04:50	05:25 (15)
	16:48	17:52	18:48		20:48	21:43	22:11	10 05:35 (15)
25	08:32	07:30	06:20		06:04	05:07	04:50	05:25 (15)
	16:50	17:54	18:50		20:50	21:44	22:11	10 05:35 (15)
26	08:30	07:28	06:18		06:02	05:05	04:51	05:25 (15)
	16:52	17:56	18:52		20:52	21:46	22:11	9 05:34 (15)
27	08:29	07:25	06:15		05:59	05:04	04:51	05:26 (15)
	16:54	17:58	18:54		20:54	21:47	22:11	9 05:35 (15)
28	08:27	07:23	06:13		05:57	05:03	04:52	05:26 (15)
	16:56	18:00	18:56		20:56	21:49	22:11	8 05:34 (15)
29	08:26		07:10		05:55	05:02	04:52	05:27 (15)
	16:58		19:58		20:58	21:50	22:10	7 05:34 (15)
30	08:24		07:08		05:53	05:00	04:53	05:29 (15)
	17:00		20:00		21:00	21:52	22:10	5 05:34 (15)
31	08:22		07:05			04:59		
	17:02		20:01			21:53		
Potential sun hours	244	270	366		422	499	517	
Total, worst case				79				166
Sun reduction				0,34				0,48
Oper. time red.				1,00				1,00
Wind dir. red.				0,98				0,77
Total reduction				0,34				0,38
Total, real				27				63

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: J - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December
1	04:54	05:30 (15)	05:36	06:33	07:29	07:30
	22:10	05:31 (15)	21:32	20:23	19:07	16:53
2	04:54		05:37	06:35	07:31	08:06 (6)
	22:09		21:30	20:20	19:04	16:51 (6)
3	04:55		05:39	06:36	07:33	08:03 (6)
	22:09		21:29	20:18	19:01	16:49 (6)
4	04:56		05:41	06:38	07:34	08:02 (6)
	22:08		21:27	20:15	18:59	16:47 (6)
5	04:57		05:43	06:40	07:36	08:04 (6)
	22:08		21:25	20:13	18:56	16:45 (6)
6	04:58		05:45	06:42	07:38	08:06 (6)
	22:07		21:23	20:10	18:54	16:43 (6)
7	04:59		05:46	06:44	07:40	08:08 (6)
	22:06		21:21	20:08	18:51	16:41 (6)
8	05:00		05:48	06:46	07:42	08:10 (6)
	22:06		21:18	20:05	18:49	16:39 (6)
9	05:01		05:50	06:48	07:44	08:11 (6)
	22:05		21:16	20:03	18:46	16:37 (6)
10	05:02		05:52	06:50	07:46	08:12 (6)
	22:04		21:14	20:00	18:44	16:35 (6)
11	05:03		05:54	06:51	07:48	08:13 (6)
	22:03		21:12	19:58	18:42	16:34 (6)
12	05:05		05:56	06:53	07:50	08:14 (6)
	22:02		21:10	19:55	18:39	16:32 (6)
13	05:06		05:57	06:55	07:52	08:15 (6)
	22:01		21:08	19:53	18:37	16:30 (6)
14	05:07		05:59	06:57	07:54	08:16 (6)
	22:00		21:06	19:50	18:34	16:28 (6)
15	05:09		06:01	06:59	07:56	08:17 (6)
	21:59		21:03	19:47	18:32	16:27 (6)
16	05:10		06:03	07:01	07:58	08:18 (6)
	21:58		21:01	19:45	18:29	16:25 (6)
17	05:11		06:05	07:02	08:00	08:19 (6)
	21:56		20:59	19:42	18:27	16:24 (6)
18	05:13		06:07	07:04	08:02	08:20 (6)
	21:55		20:57	19:40	18:25	16:22 (6)
19	05:14		06:09	07:06	08:04	08:21 (6)
	21:54		20:54	19:37	18:22	16:20 (6)
20	05:16		06:10	07:08	08:06	08:22 (6)
	21:52		20:52	19:35	18:20	16:19 (6)
21	05:17		06:12	07:10	08:08	08:23 (6)
	21:51		20:50	19:32	18:18	16:18 (6)
22	05:19		06:14	07:12	08:10	08:24 (6)
	21:49		20:47	19:30	18:15	16:16 (6)
23	05:20		06:16	07:14	08:12	08:25 (6)
	21:48		20:45	19:27	18:13	16:15 (6)
24	05:22		06:18	07:16	08:14	08:26 (6)
	21:46		20:42	19:24	18:11	16:14 (6)
25	05:24		06:20	07:17	08:16	08:27 (6)
	21:45		20:40	19:22	17:08	16:12 (6)
26	05:25		06:22	07:19	08:17	08:28 (6)
	21:43		20:38	19:19	17:06	16:11 (6)
27	05:27		06:23	07:21	08:18	08:29 (6)
	21:41		20:35	19:17	17:04	16:10 (6)
28	05:29		06:25	07:23	08:19	08:30 (6)
	21:40		20:33	19:14	17:02	16:09 (6)
29	05:30		06:27	07:25	08:20	08:31 (6)
	21:38		20:30	19:12	17:00	16:08 (6)
30	05:32		06:29	07:27	08:21	08:32 (6)
	21:36		20:28	19:09	16:57	16:07 (6)
31	05:34		06:31		08:22	08:33 (6)
	21:34		20:25		16:55	16:09 (6)
Potential sun hours	519	464	383	327	254	227
Total, worst case	1		29	53		
Sun reduction	0,49		0,40	0,31		
Oper. time red.	1,00		1,00	1,00		
Wind dir. red.	0,77		1,00	0,98		
Total reduction	0,38		0,40	0,31		
Total, real	0		12	16		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March		April	May	June	
1	08:53	08:20	07:20		07:03	05:51	04:58	
	16:10	17:04	18:02		20:03	21:02	21:54	
2	08:53	08:19	07:18		07:00	05:48	04:57	
	16:11	17:06	18:04		20:05	21:04	21:56	
3	08:52	08:17	07:16		06:58	05:46	04:56	
	16:13	17:08	18:06		20:07	21:05	21:57	
4	08:52	08:15	07:13		06:55	05:44	04:55	
	16:14	17:10	18:08		20:09	21:07	21:58	
5	08:52	08:13	07:11		06:52	05:42	04:55	
	16:15	17:12	18:10		20:11	21:09	21:59	
6	08:51	08:11	07:08		06:50	05:40	04:54	
	16:17	17:14	18:12		20:13	21:11	22:00	
7	08:51	08:09	07:06		07:31 (6)	06:47	05:38	04:53
	16:18	17:16	18:14	2	07:33 (6)	20:15	21:13	22:01
8	08:50	08:07	07:03		07:28 (6)	06:45	05:36	04:52
	16:19	17:18	18:16	5	07:33 (6)	20:17	21:15	22:02
9	08:50	08:05	07:01		07:25 (6)	06:42	05:34	04:52
	16:21	17:21	18:18	7	07:32 (6)	20:19	21:17	22:03
10	08:49	08:03	06:58		07:23 (6)	06:40	05:32	04:51
	16:23	17:23	18:20	9	07:32 (6)	20:21	21:19	22:04
11	08:48	08:01	06:56		07:20 (6)	06:37	05:30	04:51
	16:24	17:25	18:22	11	07:31 (6)	20:23	21:20	22:05
12	08:47	07:59	06:53		07:21 (6)	06:35	05:28	04:50
	16:26	17:27	18:24	9	07:30 (6)	20:25	21:22	22:06
13	08:46	07:57	06:51		07:24 (6)	06:33	05:26	04:50
	16:27	17:29	18:26	1	07:25 (6)	20:27	21:24	22:07
14	08:46	07:55	06:48			06:30	05:24	04:50
	16:29	17:31	18:28			20:29	21:26	22:07
15	08:45	07:53	06:46			06:28	05:23	04:49
	16:31	17:33	18:30			20:31	21:28	22:08
16	08:44	07:50	06:43		07:08 (1)	06:25	05:21	04:49
	16:33	17:35	18:32	1	07:09 (1)	20:33	21:29	22:09
17	08:42	07:48	06:41		07:05 (1)	06:23	05:19	04:49
	16:34	17:37	18:34	4	07:09 (1)	20:35	21:31	22:09
18	08:41	07:46	06:38		07:02 (1)	06:20	05:17	04:49
	16:36	17:39	18:36	6	07:08 (1)	20:36	21:33	22:10
19	08:40	07:44	06:36		07:00 (1)	06:18	05:16	04:49
	16:38	17:42	18:38	8	07:08 (1)	20:38	21:35	22:10
20	08:39	07:42	06:33		07:00 (1)	06:16	05:14	04:49
	16:40	17:44	18:40	5	07:05 (1)	20:40	21:36	22:10
21	08:38	07:39	06:31			06:13	05:13	04:49
	16:42	17:46	18:42			20:42	21:38	22:11
22	08:36	07:37	06:28			06:11	05:11	04:49
	16:44	17:48	18:44			20:44	21:40	22:11
23	08:35	07:35	06:25			06:09	05:10	04:50
	16:46	17:50	18:46			20:46	21:41	22:11
24	08:33	07:32	06:23			06:06	05:08	04:50
	16:48	17:52	18:48			20:48	21:43	22:11
25	08:32	07:30	06:20			06:04	05:07	04:50
	16:50	17:54	18:50			20:50	21:44	22:11
26	08:30	07:28	06:18			06:02	05:05	04:51
	16:52	17:56	18:52			20:52	21:46	22:11
27	08:29	07:25	06:15			05:59	05:04	04:51
	16:54	17:58	18:54			20:54	21:47	22:11
28	08:27	07:23	06:13			05:57	05:03	04:52
	16:56	18:00	18:56			20:56	21:49	22:11
29	08:26		07:10			05:55	05:02	04:52
	16:58		19:58			20:58	21:50	22:10
30	08:24		07:08			05:53	05:00	04:53
	17:00		20:00			21:00	21:52	22:10
31	08:22		07:05				04:59	
	17:02		20:01				21:53	
Potential sun hours	244	270	366		422	499	517	
Total, worst case				68				309
Sun reduction				0,34				0,48
Oper. time red.				1,00				1,00
Wind dir. red.				0,99				0,77
Total reduction				0,34				0,38
Total, real				23				118

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: K - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:28 (15)	05:36	06:33	07:29	08:01 (6)	07:30	08:27
	22:10	05:39 (15)	21:32	20:23	19:07	7 08:08 (6)	16:53	16:06
2	04:54	05:29 (15)	05:37	06:35	07:31	07:59 (6)	07:32	08:29
	22:09	10 05:39 (15)	21:30	20:20	19:04	10 08:09 (6)	16:51	16:05
3	04:55	05:30 (15)	05:39	06:37	07:33	08:00 (6)	07:34	08:31
	22:09	9 05:39 (15)	21:29	20:18	19:01	10 08:10 (6)	16:49	16:05
4	04:56	05:31 (15)	05:41	06:38	07:34	08:02 (6)	07:36	08:32
	22:08	8 05:39 (15)	21:27	20:15	18:59	8 08:10 (6)	16:47	16:04
5	04:57	05:32 (15)	05:43	06:40	07:36	08:04 (6)	07:38	08:34
	22:08	6 05:38 (15)	21:25	20:13	18:56	6 08:10 (6)	16:45	16:03
6	04:58	05:32 (15)	05:45	06:42	07:38	08:06 (6)	07:40	08:35
	22:07	4 05:36 (15)	21:23	20:10	18:54	3 08:09 (6)	16:43	16:03
7	04:59		05:46	06:44	07:40		07:42	08:36
	22:06		21:21	20:08	18:51		16:41	16:02
8	05:00		05:48	06:46	07:42		07:44	08:38
	22:06		21:18	20:05	18:49		16:39	16:02
9	05:01		05:50	06:48	07:44		07:46	08:39
	22:05		21:16	20:03	18:46		16:37	16:01
10	05:02		05:52	06:50	07:46		07:48	08:40
	22:04		21:14	20:00	18:44		16:35	16:01
11	05:03		05:54	06:51	07:48		07:50	08:41
	22:03		21:12	19:58	18:42		16:34	16:01
12	05:05		05:56	06:53	07:50		07:52	08:43
	22:02		21:10	19:55	18:39		16:32	16:00
13	05:06		05:57	06:55	07:52		07:54	08:44
	22:01		21:08	19:53	18:37		16:30	16:00
14	05:07		05:59	06:57	07:54		07:56	08:45
	22:00		21:06	19:50	18:34		16:28	16:00
15	05:09		06:01	06:59	07:56		07:58	08:46
	21:59		21:03	19:48	18:32		16:27	16:00
16	05:10		06:03	07:01	07:58		08:00	08:47
	21:58		21:01	19:45	18:29		16:25	16:00
17	05:11		06:05	07:02	08:00		08:02	08:48
	21:56		20:59	19:42	18:27		16:24	16:00
18	05:13		06:07	07:04	08:02		08:04	08:48
	21:55		20:57	19:40	18:25		16:22	16:00
19	05:14		06:09	07:06	08:04		08:06	08:49
	21:54		20:54	19:37	18:22		16:20	16:01
20	05:16		06:10	07:08	08:06		08:08	08:50
	21:52		20:52	19:35	18:20		16:19	16:01
21	05:17		06:12	07:10	08:08		08:10	08:50
	21:51		20:50	19:32	18:18		16:18	16:01
22	05:19		06:14	07:12	08:10		08:12	08:51
	21:49		20:47	19:30	18:15		16:16	16:02
23	05:20		06:16	07:14	08:12		08:13	08:51
	21:48		20:45	19:27	3 07:49 (1)	18:13	16:15	16:02
24	05:22		06:18	07:16	08:14		08:15	08:52
	21:46		20:42	19:24	8 07:51 (1)	18:11	16:14	16:03
25	05:24		06:20	07:17	08:16		08:17	08:52
	21:45		20:40	19:22	7 07:52 (1)	17:08	16:12	16:04
26	05:25		06:22	07:19	08:18		08:19	08:52
	21:43		20:38	19:19	5 07:51 (1)	17:06	16:11	16:04
27	05:27		06:23	07:21	08:20		08:21	08:53
	21:41		20:35	19:17	2 07:50 (1)	17:04	16:10	16:05
28	05:29		06:25	07:23	08:22		08:22	08:53
	21:40		20:33	19:14	17:02		16:09	16:06
29	05:30		06:27	07:25	08:24		08:24	08:53
	21:38		20:30	19:12	17:00		16:08	16:07
30	05:32		06:29	07:27	08:26		08:26	08:53
	21:36		20:28	19:09	16:57		16:07	16:08
31	05:34		06:31		08:28			08:53
	21:34		20:25		16:55		16:09	16:09
Potential sun hours	519	464	383	327		254	227	
Total, worst case	48			25		44		
Sun reduction	0,49			0,40		0,31		
Oper. time red.	1,00			1,00		1,00		
Wind dir. red.	0,77			1,00		0,98		
Total reduction	0,38			0,40		0,31		
Total, real	18			10		13		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March		April	May	June	
1	08:53	08:20	07:20		07:03	05:51	04:58	
	16:10	17:04	18:02		20:03	21:02	21:54	
2	08:53	08:19	07:18		07:00	05:48	04:57	
	16:11	17:06	18:04		20:05	21:04	21:56	
3	08:52	08:17	07:16		06:58	05:46	04:56	
	16:13	17:08	18:06		20:07	21:05	21:57	
4	08:52	08:15	07:13		06:55	05:44	04:55	
	16:14	17:10	18:08		20:09	21:07	21:58	
5	08:52	08:13	07:11		06:52	05:42	04:55	
	16:15	17:12	18:10		20:11	21:09	21:59	
6	08:51	08:11	07:08		06:50	05:40	04:54	
	16:17	17:14	18:12		20:13	21:11	22:00	
7	08:51	08:09	07:06		06:47	05:38	04:53	
	16:18	17:16	18:14		20:15	21:13	22:01	
8	08:50	08:07	07:03		06:45	05:36	04:52	05:30 (18)
	16:19	17:18	18:16		20:17	21:15	22:02	1 05:31 (18)
9	08:50	08:05	07:01	07:25 (6)	06:42	05:34	04:52	05:27 (18)
	16:21	17:21	18:18	3 07:28 (6)	20:19	21:17	22:03	6 05:33 (18)
10	08:49	08:03	06:58	07:23 (6)	06:40	05:32	04:51	05:26 (18)
	16:23	17:23	18:20	5 07:28 (6)	20:21	21:19	22:04	9 05:35 (18)
11	08:48	08:01	06:56	07:20 (6)	06:37	05:30	04:51	05:25 (18)
	16:24	17:25	18:22	8 07:28 (6)	20:23	21:20	22:05	10 05:35 (18)
12	08:47	07:59	06:53	07:18 (6)	06:35	05:28	04:50	05:25 (18)
	16:26	17:27	18:24	9 07:27 (6)	20:25	21:22	22:06	12 05:37 (18)
13	08:46	07:57	06:51	07:17 (6)	06:33	05:26	04:50	05:25 (18)
	16:27	17:29	18:26	8 07:25 (6)	20:27	21:24	22:07	12 05:37 (18)
14	08:46	07:55	06:48	07:20 (6)	06:30	05:24	04:50	05:25 (18)
	16:29	17:31	18:28	3 07:23 (6)	20:29	21:26	22:07	13 05:38 (18)
15	08:45	07:53	06:46		06:28	05:23	04:49	05:24 (18)
	16:31	17:33	18:30		20:31	21:28	22:08	14 05:38 (18)
16	08:44	07:50	06:43		06:25	05:21	04:49	05:24 (18)
	16:33	17:35	18:32		20:33	21:29	22:09	15 05:39 (18)
17	08:42	07:48	06:41		06:23	05:19	04:49	05:24 (18)
	16:34	17:37	18:34		20:35	21:31	22:09	15 05:39 (18)
18	08:41	07:46	06:38		06:20	05:17	04:49	05:24 (18)
	16:36	17:39	18:36		20:36	21:33	22:10	15 05:39 (18)
19	08:40	07:44	06:36		06:18	05:16	04:49	05:24 (18)
	16:38	17:42	18:38		20:38	21:35	22:10	16 05:40 (18)
20	08:39	07:42	06:33		06:16	05:14	04:49	05:24 (18)
	16:40	17:44	18:40		20:40	21:36	22:10	16 05:40 (18)
21	08:38	07:39	06:31		06:13	05:13	04:49	05:25 (18)
	16:42	17:46	18:42		20:42	21:38	22:11	16 05:41 (18)
22	08:36	07:37	06:28		06:11	05:11	04:49	05:25 (18)
	16:44	17:48	18:44		20:44	21:40	22:11	16 05:41 (18)
23	08:35	07:35	06:25		06:09	05:10	04:50	05:25 (18)
	16:46	17:50	18:46		20:46	21:41	22:11	16 05:41 (18)
24	08:33	07:32	06:23		06:06	05:08	04:50	05:26 (18)
	16:48	17:52	18:48		20:48	21:43	22:11	16 05:42 (18)
25	08:32	07:30	06:20		06:04	05:07	04:50	05:26 (18)
	16:50	17:54	18:50		20:50	21:44	22:11	15 05:41 (18)
26	08:30	07:28	06:18		06:02	05:05	04:51	05:26 (18)
	16:52	17:56	18:52		20:52	21:46	22:11	15 05:41 (18)
27	08:29	07:25	06:15		05:59	05:04	04:51	05:27 (18)
	16:54	17:58	18:54		20:54	21:47	22:11	14 05:41 (18)
28	08:27	07:23	06:13		05:57	05:03	04:52	05:27 (18)
	16:56	18:00	18:56		20:56	21:49	22:11	14 05:41 (18)
29	08:26		07:10		05:55	05:02	04:52	05:28 (18)
	16:58		19:58		20:58	21:50	22:10	13 05:41 (18)
30	08:24		07:08		05:53	05:00	04:53	05:29 (18)
	17:00		20:00		21:00	21:52	22:10	12 05:41 (18)
31	08:22		07:05			04:59		
	17:02		20:01			21:53		
Potential sun hours	244	270	366		422	499	517	
Total, worst case				36				301
Sun reduction				0,34				0,48
Oper. time red.				1,00				1,00
Wind dir. red.				0,99				0,77
Total reduction				0,34				0,38
Total, real				12				114

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: L - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:29 (18)	05:36	06:33	07:29	07:56 (6)	07:30	08:27
	22:10	05:40 (18)	21:32	20:23	19:07	08:06 (6)	16:53	16:06
2	04:54	05:30 (18)	05:37	06:35	07:31	07:58 (6)	07:32	08:29
	22:09	05:40 (18)	21:30	20:20	19:04	08:06 (6)	16:51	16:05
3	04:55	05:31 (18)	05:39	06:37	07:33	08:00 (6)	07:34	08:31
	22:09	05:39 (18)	21:29	20:18	19:01	08:06 (6)	16:49	16:05
4	04:56	05:33 (18)	05:41	06:38	07:34	08:02 (6)	07:36	08:32
	22:08	05:38 (18)	21:27	20:15	18:59	08:06 (6)	16:47	16:04
5	04:57		05:43	06:40	07:36	08:04 (6)	07:38	08:34
	22:08		21:25	20:13	18:56	08:05 (6)	16:45	16:03
6	04:58		05:45	06:42	07:38		07:40	08:35
	22:07		21:23	20:10	18:54		16:43	16:03
7	04:59		05:46	06:44	07:40		07:42	08:36
	22:06		21:21	20:08	18:51		16:41	16:02
8	05:00		05:48	06:46	07:42		07:44	08:38
	22:06		21:18	20:05	18:49		16:39	16:02
9	05:01		05:50	06:48	07:44		07:46	08:39
	22:05		21:16	20:03	18:46		16:37	16:01
10	05:02		05:52	06:50	07:46		07:48	08:40
	22:04		21:14	20:00	18:44		16:35	16:01
11	05:03		05:54	06:51	07:48		07:50	08:41
	22:03		21:12	19:58	18:42		16:34	16:01
12	05:05		05:56	06:53	07:50		07:52	08:43
	22:02		21:10	19:55	18:39		16:32	16:00
13	05:06		05:57	06:55	07:52		07:54	08:44
	22:01		21:08	19:53	18:37		16:30	16:00
14	05:07		05:59	06:57	07:54		07:56	08:45
	22:00		21:06	19:50	18:34		16:28	16:00
15	05:09		06:01	06:59	07:56		07:58	08:46
	21:59		21:03	19:48	18:32		16:27	16:00
16	05:10		06:03	07:01	07:58		08:00	08:47
	21:58		21:01	19:45	18:29		16:25	16:00
17	05:11		06:05	07:02	08:00		08:02	08:48
	21:56		20:59	19:42	18:27		16:24	16:00
18	05:13		06:07	07:04	08:02		08:04	08:48
	21:55		20:57	19:40	18:25		16:22	16:00
19	05:14		06:09	07:06	08:04		08:06	08:49
	21:54		20:54	19:37	18:22		16:20	16:01
20	05:16		06:10	07:08	08:06		08:08	08:50
	21:52		20:52	19:35	18:20		16:19	16:01
21	05:17		06:12	07:10	08:08		08:10	08:50
	21:51		20:50	19:32	18:18		16:18	16:01
22	05:19		06:14	07:12	08:10		08:12	08:51
	21:49		20:47	19:30	18:15		16:16	16:02
23	05:20		06:16	07:14	08:12		08:13	08:51
	21:48		20:45	19:27	18:13		16:15	16:02
24	05:22		06:18	07:16	08:14		08:15	08:52
	21:46		20:42	19:24	18:11		16:14	16:03
25	05:24		06:20	07:17	07:16		08:17	08:52
	21:45		20:40	19:22	17:08		16:12	16:04
26	05:25		06:22	07:19	07:18		08:19	08:52
	21:43		20:38	19:19	17:06		16:11	16:04
27	05:27		06:23	07:21	07:20		08:21	08:53
	21:41		20:35	19:17	17:04		16:10	16:05
28	05:29		06:25	07:23	07:22		08:22	08:53
	21:40		20:33	19:14	17:02		16:09	16:06
29	05:30		06:27	07:25	07:24		08:24	08:53
	21:38		20:30	19:12	17:00		16:08	16:07
30	05:32		06:29	07:27	07:26	07:57 (6)	08:26	08:53
	21:36		20:28	19:09	16:57	08:04 (6)	16:07	16:08
31	05:34		06:31		07:28			08:53
	21:34		20:25		16:55		16:09	16:09
Potential sun hours	519	464	383	327		254	227	
Total, worst case	34		7		29			
Sun reduction	0,49		0,40		0,31			
Oper. time red.	1,00		1,00		1,00			
Wind dir. red.	0,77		0,99		0,99			
Total reduction	0,38		0,40		0,31			
Total, real	13		3		9			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
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+370 37 407548
Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E70 Shut downShadow receptor: M - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:51	04:58	04:54	05:36	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
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	16:56	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:01	16:09	16:06
29	08:25		07:10	05:55	05:02	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

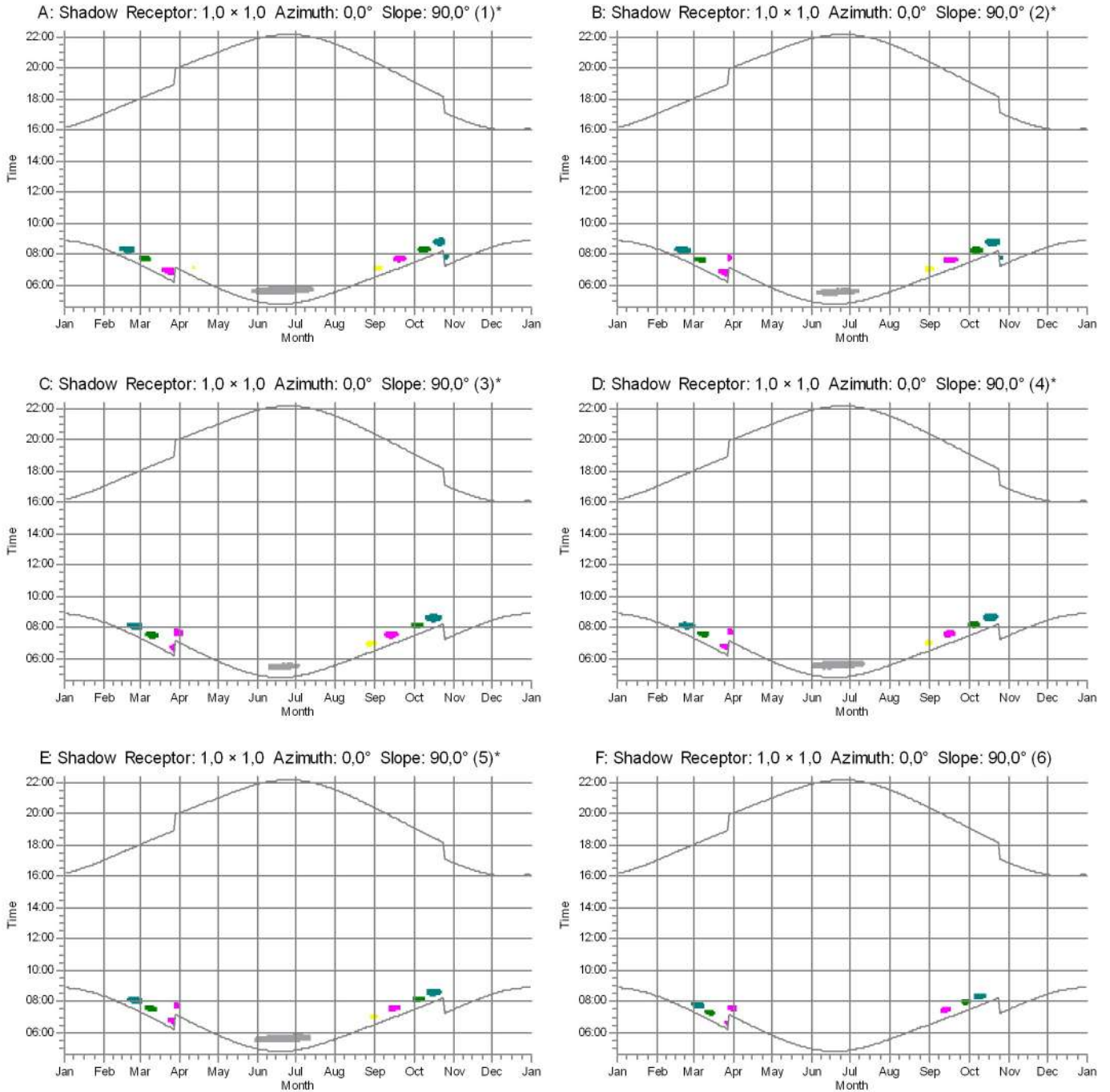
6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E70 Shut down



WTGs

- 1: ENERCON E-70 E4 2000 71.0 IOI hub: 85,0 m (TOT: 120,5 m) (1)
- 2: ENERCON E-70 E4 2000 71.0 IOI hub: 85,0 m (TOT: 120,5 m) (2)
- 5: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)

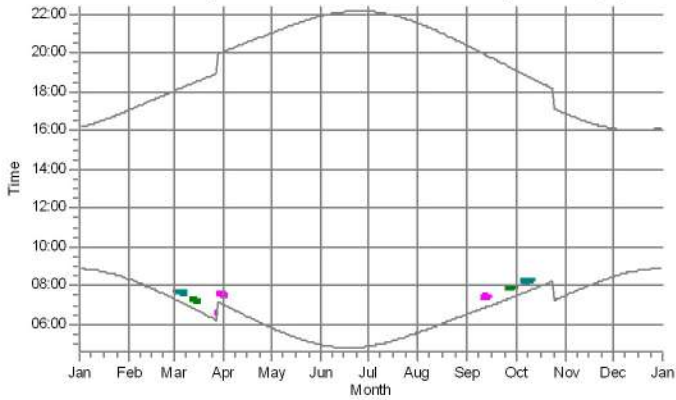
- 6: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)
- 16: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (11)

* Results reduced by flicker curtailment

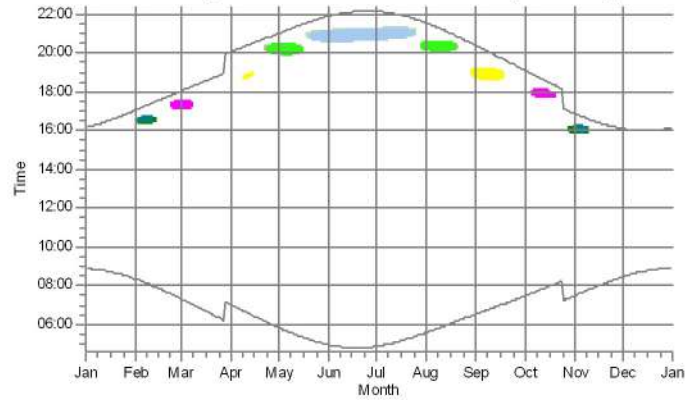
SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E70 Shut down

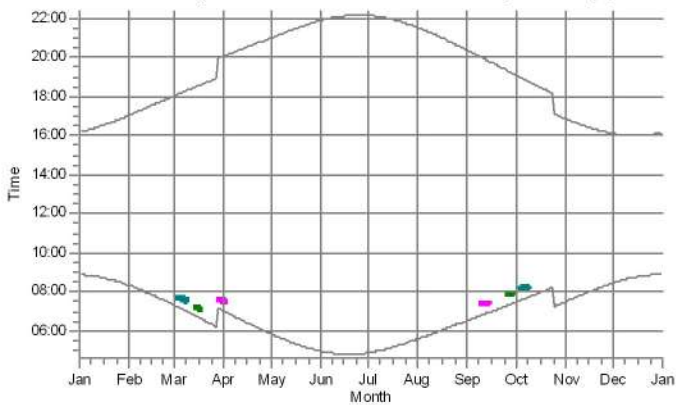
G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)



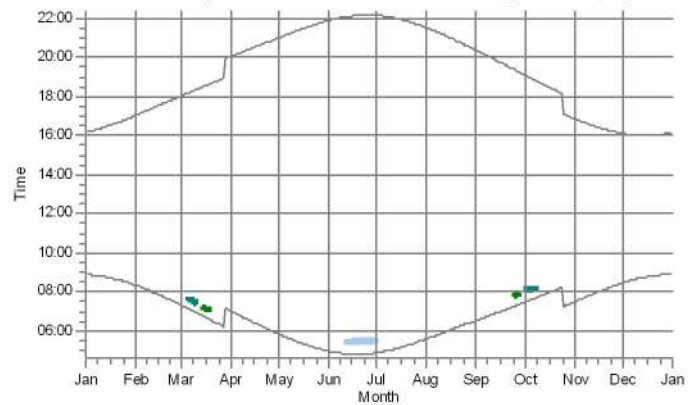
H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)*



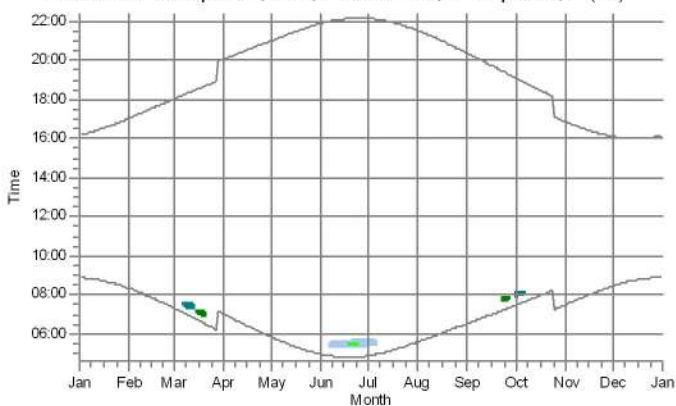
I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)



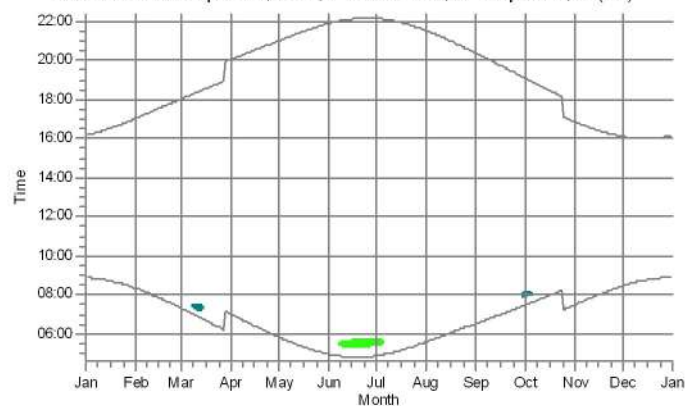
J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)



K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)



L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)



WTGs

- 1: ENERCON E-70 E4 2000 71.0 IOI hub: 85,0 m (TOT: 120,5 m) (1)
- 2: ENERCON E-70 E4 2000 71.0 IOI hub: 85,0 m (TOT: 120,5 m) (2)
- 5: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)

- 14: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (9)
- 15: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (10)
- 17: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (12)
- 18: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (13)

* Results reduced by flicker curtailment

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas

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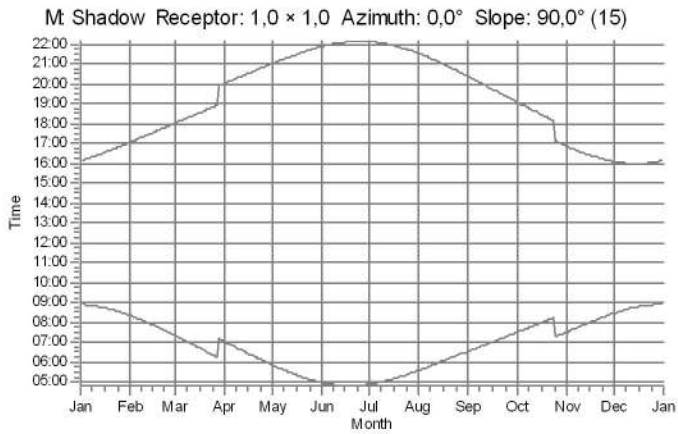
Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

2021.06.16 15:11/3.4.415

SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E70 Shut down



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 1 - ENERCON E-70 E4 2000 71.0 IO! hub: 85,0 m (TOT: 120,5 m) (1)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53 16:10	08:20 17:04	07:20 07:46-07:49/3 18:02	07:02 20:03	05:50 21:01	04:58 21:54	04:53 22:10	05:36 21:32	06:33 20:23	07:29 07:56-08:02/6 19:06 08:04-08:15/11	07:30 15:56-16:11/15 16:53	08:27 16:06
2	08:53 16:11	08:19 16:29-16:33/4 17:06	07:18 07:43-07:50/7 18:04	07:00 20:05	05:48 21:03	04:57 21:56	04:54 22:09	05:37 21:30	06:35 20:20	07:31 07:58-08:01/3 19:04 08:02-08:16/14	07:32 15:55-16:11/16 16:51	08:29 16:05
3	08:52 16:13	08:17 16:27-16:35/8 17:08	07:15 07:41-07:51/10 18:06	06:57 20:07	05:46 21:05	04:56 21:57	04:55 22:09	05:39 21:28	06:36 20:18	07:32 08:02-08:20/18 19:01	07:34 15:56-16:12/16 16:49	08:30 16:04
4	08:52 16:14	08:15 16:27-16:37/10 17:10	07:13 07:38-07:50/12 18:08	06:55 20:09	05:44 21:07	04:55 21:58	04:56 22:08	05:41 21:26	06:38 20:15	07:34 08:02-08:22/20 18:59	07:36 15:56-16:12/16 16:47	08:32 16:04
5	08:52 16:15	08:13 16:26-16:40/14 17:12	07:11 07:36-07:51/15 18:10	06:52 20:11	05:42 21:09	04:54 21:59	04:57 22:08	05:43 21:24	06:40 20:13	07:36 08:04-08:23/19 18:56	07:38 15:56-16:11/15 16:45	08:33 16:03
6	08:51 16:17	08:11 16:26-16:42/16 17:14	07:08 07:33-07:50/17 18:12	06:50 20:13	05:40 21:11	04:54 22:00	04:58 22:07	05:44 21:22	06:42 20:10	07:38 08:06-08:24/18 18:54	07:40 15:56-16:09/13 16:43	08:35 16:03
7	08:51 16:18	08:09 16:26-16:42/16 17:16	07:06 07:30-07:48/18 18:14	06:47 20:15	05:38 21:13	04:53 22:01	04:59 22:06	05:46 21:20	06:44 20:08	07:40 08:08-08:25/17 18:51	07:42 15:57-16:08/11 16:41	08:36 16:02
8	08:50 16:19	08:07 16:26-16:42/16 17:18	07:03 07:28-07:46/18 18:16	06:45 20:17	05:36 21:15	04:52 22:02	05:00 22:06	05:48 21:18	06:46 20:05	07:42 08:10-08:26/16 18:49	07:44 15:58-16:06/8 16:39	08:38 16:02
9	08:49 16:21	08:05 16:27-16:42/15 17:20	07:01 07:25-07:44/19 18:18	06:42 20:19	05:34 21:17	04:52 22:03	05:01 22:05	05:50 21:16	06:48 20:03	07:44 08:12-08:26/14 18:46	07:46 16:00-16:03/3 16:37	08:39 16:01
10	08:49 16:22	08:03 16:26-16:41/15 17:23	06:58 07:24-07:43/19 18:20	06:40 20:21	05:32 21:18	04:51 22:04	05:02 22:04	05:52 21:14	06:49 20:00	07:46 08:14-08:25/11 18:44	07:48 16:35	08:40 16:01
11	08:48 16:24	08:01 16:27-16:40/13 17:25	06:56 07:20-07:21/1 18:22 07:23-07:38/15	06:37 20:23	05:30 21:20	04:51 22:05	05:03 22:03	05:54 21:12	06:51 19:58	07:48 08:16-08:25/9 18:41	07:50 16:34	08:41 16:00
12	08:47 16:26	07:59 16:29-16:39/10 17:27	06:53 07:18-07:22/4 18:24 07:24-07:36/12	06:35 20:25	05:28 21:22	04:50 22:06	05:05 22:02	05:55 21:10	06:53 19:55	07:50 08:18-08:23/5 18:39	07:52 16:32	08:42 16:00
13	08:46 16:27	07:57 16:31-16:38/7 17:29	06:51 07:15-07:22/7 18:26 07:25-07:34/9	06:32 20:27	05:26 21:24	04:50 22:07	05:06 22:01	05:57 21:08	06:55 19:53	07:52 08:20-08:21/1 18:37	07:54 16:30	08:44 16:00
14	08:45 16:29	07:55 17:31	06:48 07:13-07:22/9 18:28 07:28-07:32/4	06:30 20:29	05:24 21:26	04:49 22:07	05:07 22:00	05:59 21:05	06:57 19:50	07:54 18:34	07:56 16:28	08:45 16:00
15	08:44 16:31	07:53 17:33	06:46 07:10-07:21/11 18:30	06:28 20:31	05:23 21:28	04:49 22:08	05:08 21:59	06:01 21:03	06:59 19:47	07:56 18:32	07:58 16:27	08:46 16:00
16	08:43 16:32	07:50 17:35	06:43 07:08-07:20/12 18:32	06:25 20:32	05:21 21:29	04:49 22:08	05:10 21:57	06:03 21:01	07:01 19:45	07:58 18:29	08:00 16:25	08:47 16:00
17	08:42 16:34	07:48 17:37	06:41 07:05-07:17/12 18:34	06:23 20:34	05:19 21:31	04:49 22:09	05:11 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:02 16:23	08:47 16:00
18	08:41 16:36	07:46 17:39	06:38 07:02-07:12/10 18:36	06:20 20:36	05:17 21:33	04:49 22:09	05:13 21:55	06:07 20:56	07:04 19:40	08:01 18:24	08:04 16:22	08:48 16:00
19	08:40 16:38	07:44 17:41	06:36 07:00-07:09/9 18:38	06:18 20:38	05:16 21:34	04:49 22:10	05:14 21:54	06:08 20:54	07:06 19:37	08:03 18:22	08:06 16:20	08:49 16:01
20	08:39 16:40	07:41 17:44	06:33 07:00-07:05/5 18:40	06:16 20:40	05:14 21:36	04:49 22:10	05:16 21:52	06:10 20:52	07:08 19:35	08:05 18:20	08:08 16:19	08:50 16:01
21	08:37 16:42	07:39 17:46	06:30 18:42	06:13 20:42	05:13 21:38	04:49 22:10	05:17 21:51	06:12 20:49	07:10 19:32	08:07 18:17	08:10 16:18	08:50 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:39	04:49 22:11	05:19 21:49	06:14 20:47	07:12 19:29	08:09 18:15	08:11 16:16	08:51 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11	05:20 21:48	06:16 20:45	07:14 07:46-07:49/3 19:27	08:11 18:13	08:13 16:15	08:51 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11	05:22 21:46	06:18 20:42	07:15 07:43-07:52/9 19:24	08:13 18:11	08:15 16:14	08:52 16:03
25	08:32 16:49	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11	05:24 21:45	06:20 20:40	07:17 07:45-07:55/10 19:22	07:15 17:08	08:17 16:12	08:52 16:04
26	08:30 16:51	07:27 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:50 22:11	05:25 21:43	06:21 20:38	07:19 07:46-07:57/11 19:19	07:17 17:06	08:19 16:11	08:52 16:04
27	08:29 16:53	07:25 17:58	06:15 18:54	05:59 20:54	05:04 21:47	04:51 22:11	05:27 21:41	06:23 20:35	07:21 07:48-08:00/12 19:17	07:20 17:04	08:20 16:10	08:53 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11	05:29 21:39	06:25 20:33	07:23 07:50-08:02/12 19:14	07:22 17:02	08:22 16:09	08:53 16:06
29	08:25 16:58	07:21 18:02	06:11 19:57	05:55 20:58	05:02 21:50	04:52 22:10	05:30 21:38	06:27 20:30	07:25 07:52-08:02/10 19:12	07:24 16:00-16:08/8 16:59	08:24 16:08	08:53 16:07
30	08:24 17:00	07:18 18:08	06:08 19:59	05:53 21:00	05:00 21:52	04:53 22:10	05:32 21:36	06:29 20:28	07:27 07:54-08:02/8 19:09 08:05-08:13/8	07:26 15:58-16:09/11 16:57	08:26 16:07	08:53 16:08
31	08:22 17:02	07:15 18:01	07:05 20:01	05:49 21:53	05:00 21:53	04:59 21:53	05:34 21:34	06:31 20:25	07:28 15:57-16:10/13 16:55	07:28 15:57-16:10/13 16:55	08:53 16:07	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	144	258	422	0	0	0	0	83	214	113	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 2 - ENERCON E-70 E4 2000 71.0 IO! hub: 85,0 m (TOT: 120,5 m) (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains sun rise and set times. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 3 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (7)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:22	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 4 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:30	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	17:02	16:09	16:06
29	08:25		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	16:59	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 5 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (9)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a matrix of sun rise and set times (hh:mm) and a final column for 'Sum of minutes with flicker'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 6 - ENERCON E-82 2000 82.0 !OI hub: 78,3 m (TOT: 119,3 m) (10)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (hh:mm) and a numerical value. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 7 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (2)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:07	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:42
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:47	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:00
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:11	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 8 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (3)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:11	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 9 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
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3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
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	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
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	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
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10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
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	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 10 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (5)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns (January to December) and 31 rows (1 to 31). Each cell contains a 2x2 grid of times (Sun rise, Sun set, First time with flicker, Last time with flicker). Summary row at the bottom: Potential sun hours, Sum of minutes with flicker.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 11 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (6) Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:29	06:25	07:23	08:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:11	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 12 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (7)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:03	05:51	04:58	04:53	05:36	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:07	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:19	20:05	18:49	16:39	16:02
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:47	07:57	06:51	06:33	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:35	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:42	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:31	06:13	05:13	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:18	16:18	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:30	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:16	08:14	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:15	08:17	08:52
	16:50	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:22	07:19	08:17	08:19	08:53
	16:52	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:54	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	08:21	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:01	16:09	16:06
29	08:26		07:10	05:55	05:02	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:58		19:58	20:58	21:50	22:11	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		20:00	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 13 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and 31 rows for days. Each cell contains a time range (e.g., 08:53 | 16:10) representing shadow periods. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 14 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day (1-31), showing sun rise/set times and operational status (0/1) for each hour.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 15 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 matrix of times (Sun rise, Sun set, First time with flicker, Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each month's data.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
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SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 16 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (11)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for individual days (1-31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each month's column.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 17 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise, Sun set, First time with flicker, Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each month column.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 18 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)
Assumptions for shadow calculations
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

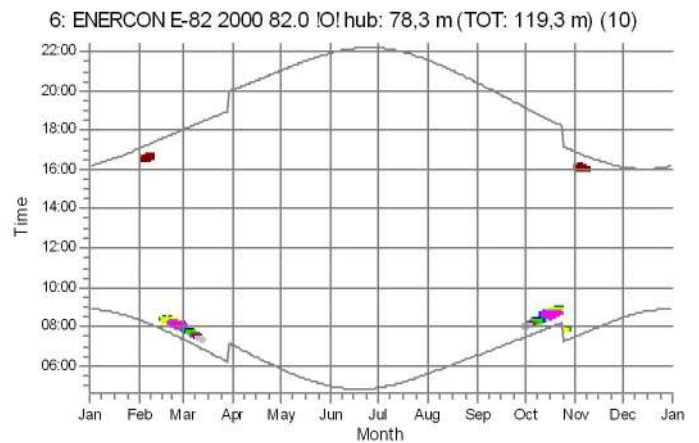
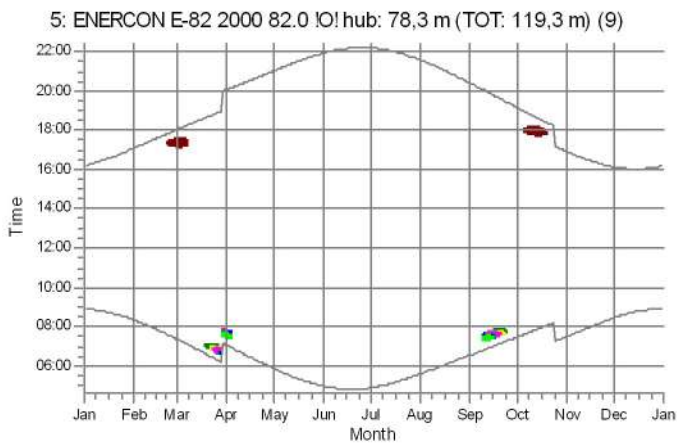
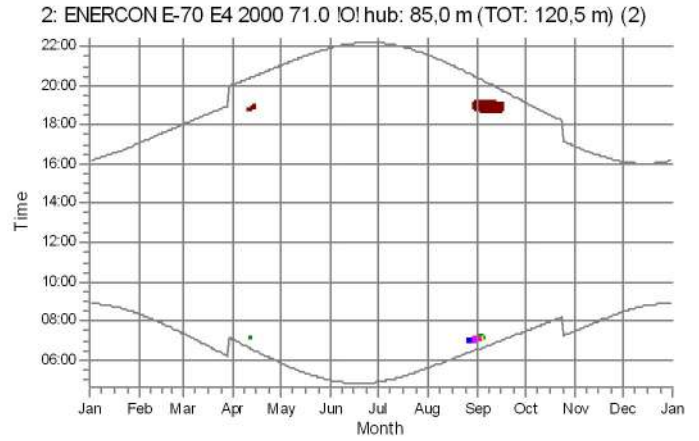
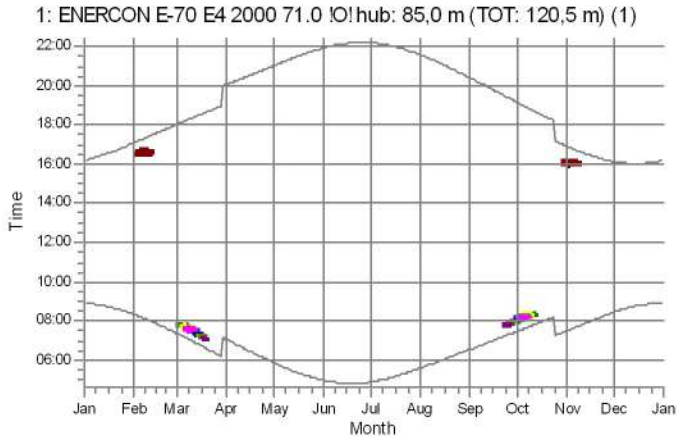
Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 matrix of times (hh:mm) and a 'Sum' column. Includes summary rows for 'Potential sun hours' and 'Sum of minutes with flicker'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E70 Shut down



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)*
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)*
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)*
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)*
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)*
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)

- G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)*
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

* Results reduced by flicker curtailment

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

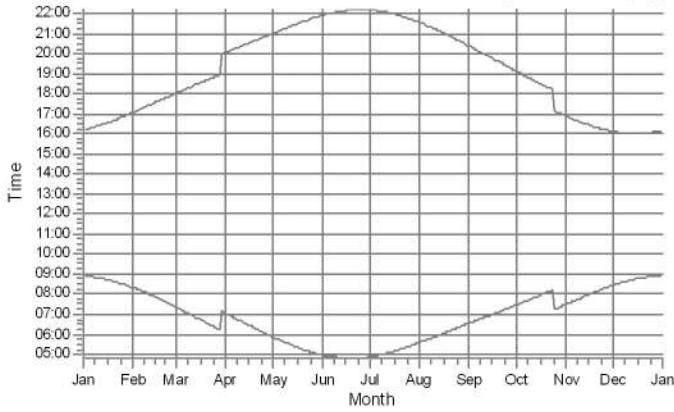
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Calculated:
2021.06.16 15:11/3.4.415

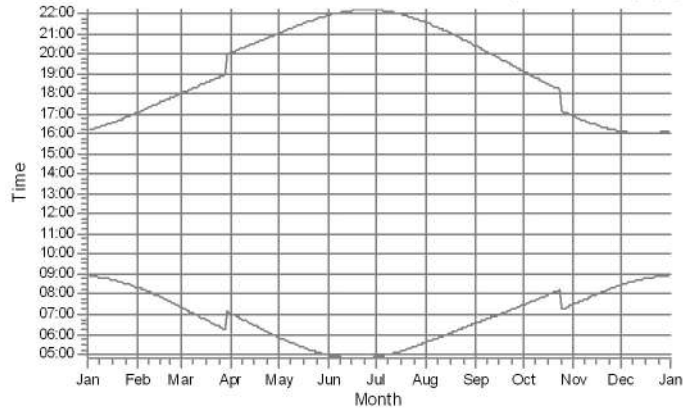
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E70 Shut down

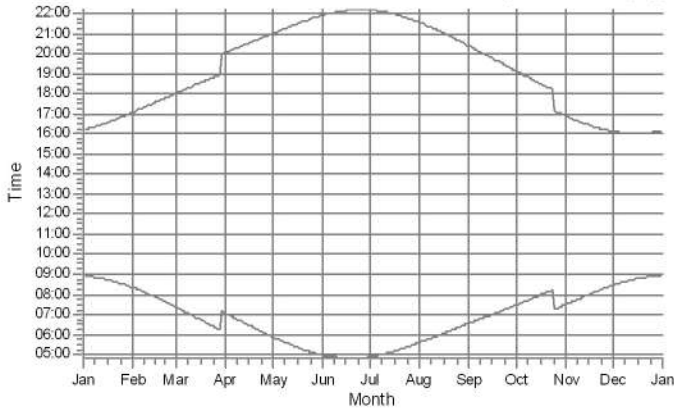
7: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)



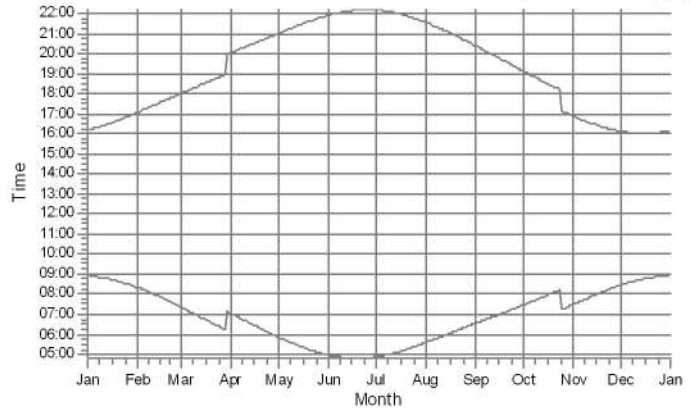
8: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)



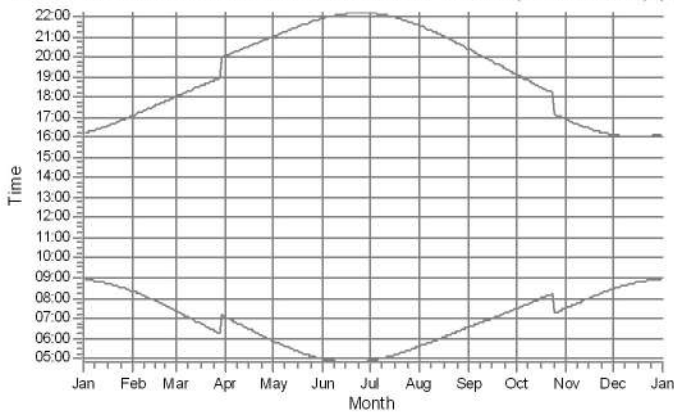
9: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)



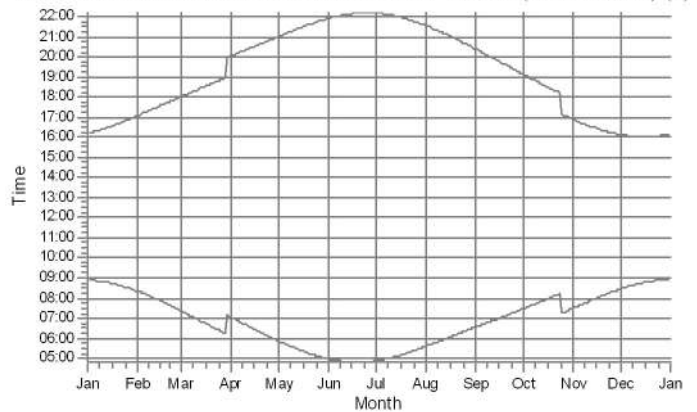
10: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)



11: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)



12: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)



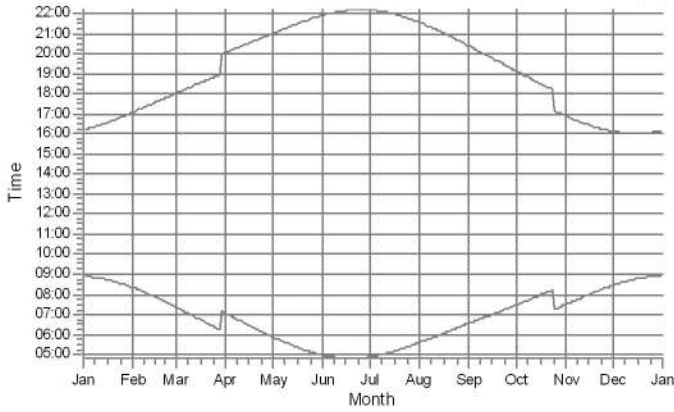
Shadow receptors

* Results reduced by flicker curtailment

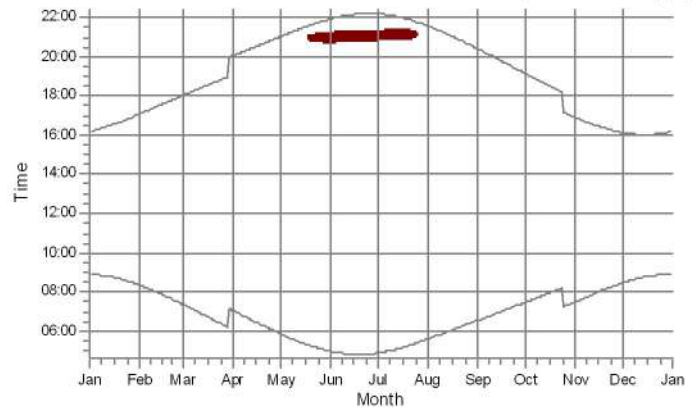
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E70 Shut down

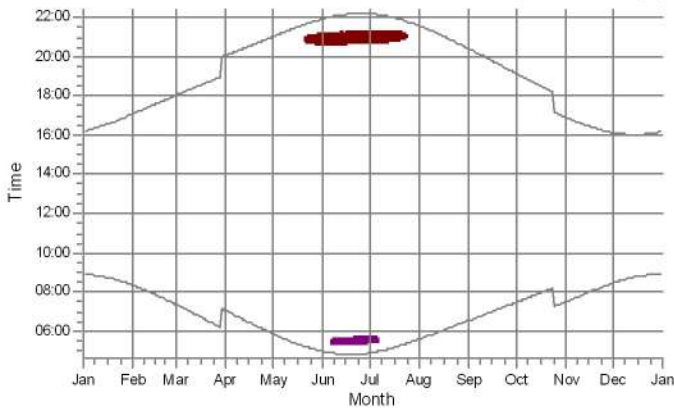
13: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (8)



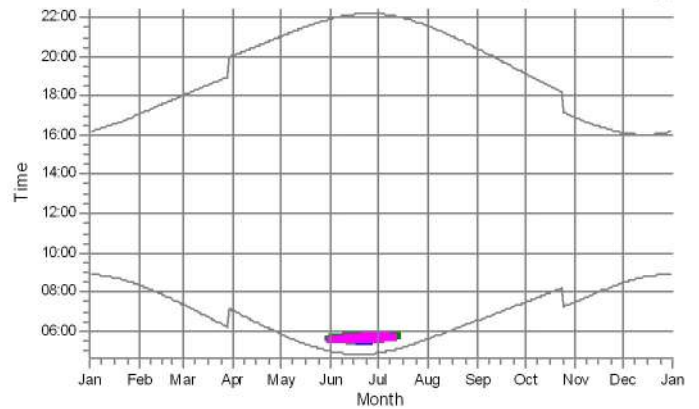
14: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (9)



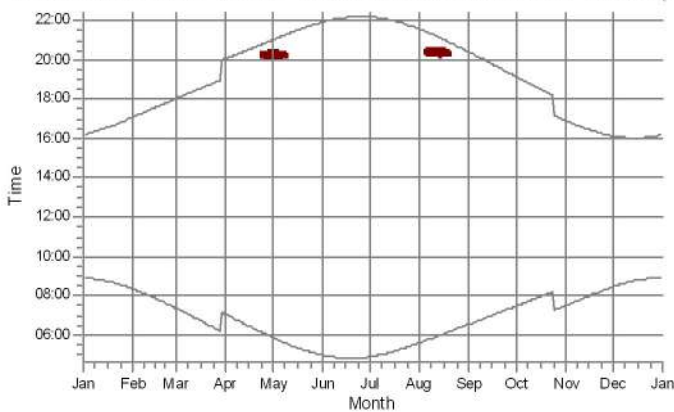
15: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (10)



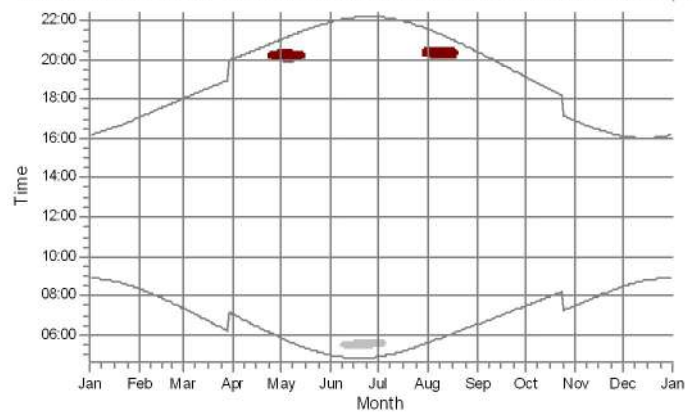
16: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (11)



17: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



18: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)*
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)*
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)*
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)*
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)*

- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)*
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

* Results reduced by flicker curtailment

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:

2021.06.16 15:11/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 1 - ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (1)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
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25												
26												
27												
28												
29												
30												
31												

Project:

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Calculated:
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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 2 - ENERCON E-70 E4 2000 71.0 !O! hub: 85,0 m (TOT: 120,5 m) (2)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1				18:49-19:18								
2				18:47-19:17								
3				18:47-19:18								
4				18:46-19:17								
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6				18:46-19:16								
7				18:46-19:16 07:12-07:15								
8				18:46-19:15 07:09-07:14								
9				18:47-19:14 07:07-07:14								
10				18:48-19:12 07:04-07:13								
11				18:49-19:11 07:02-07:12								
12				18:50-19:09 07:00-07:09								
13				18:52-19:07 06:57-07:07								
14				18:56-19:04 06:55-07:06								
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31			18:49-19:17									

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 3 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (7)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 4 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (8)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
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Project:

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Calculated:
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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 5 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (9)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 6 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:

2021.06.16 15:11/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 7 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:

2021.06.16 15:11/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 8 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 9 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 10 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 11 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:
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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 12 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:
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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 13 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 14 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:
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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 15 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:
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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 16 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (11)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:
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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 17 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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Calculated:
2021.06.16 15:11/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E70 Shut downWTG: 18 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

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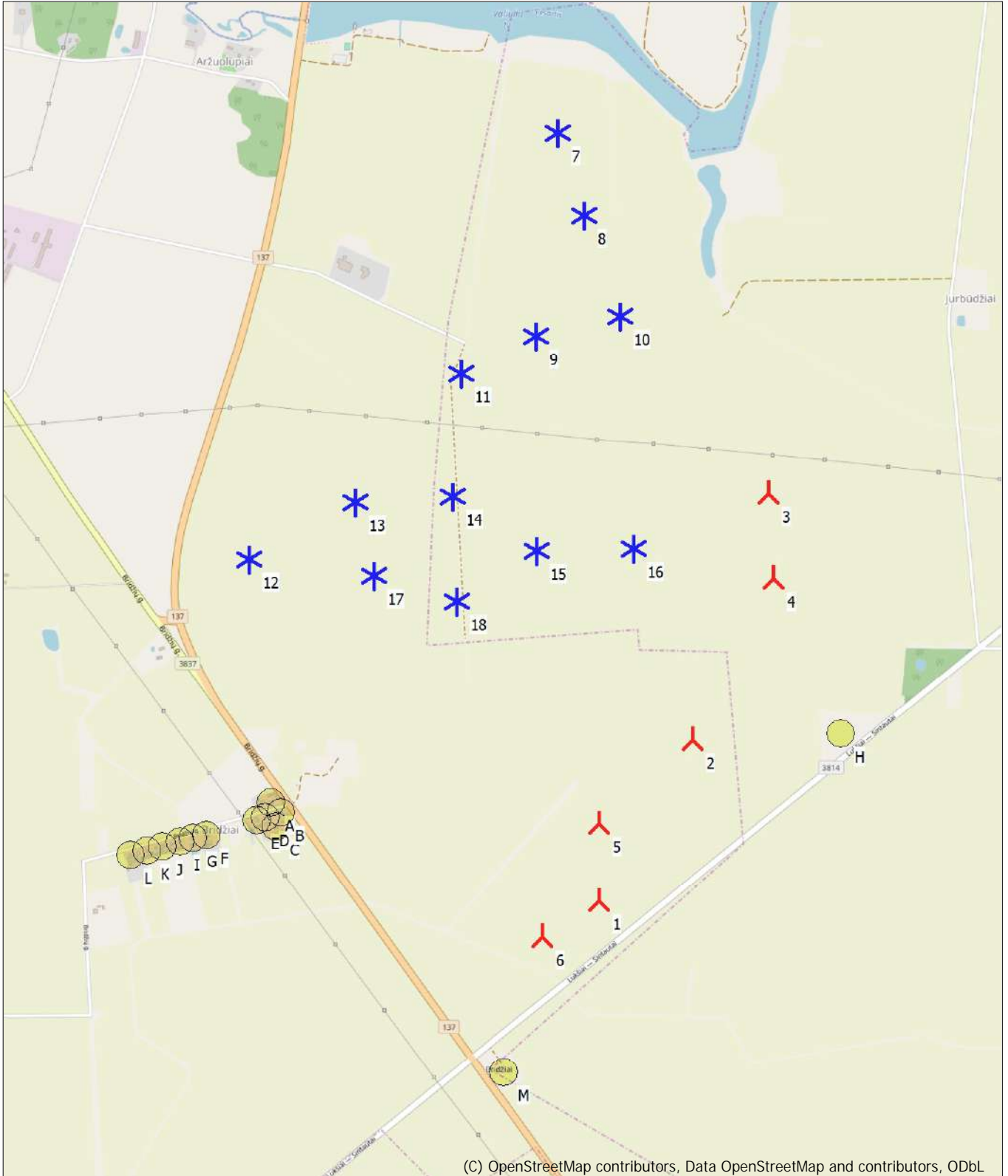
Raminta Survilø / r.survile@infraplanas.lt

Calculated:

2021.06.16 15:11/3.4.415

SHADOW - Map

Calculation: Suminis poveikis Enercon E70 Shut down



0 250 500 750 1000m

Map: EMD OpenStreetMap , Print scale 1:20.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 441.861 North: 6.088.422

🚧 New WTG * Existing WTG 🟡 Shadow receptor

Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Main Result

Calculation: Suminis poveikis Enercon E82

Assumptions for shadow calculations

Maximum distance for influence

Calculate only when more than 20 % of sun is covered by the blade

Please look in WTG table

Minimum sun height over horizon for influence 3 °

Day step for calculation 1 days

Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time

0	1	Sum
4.380	4.380	8.760

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:

Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo

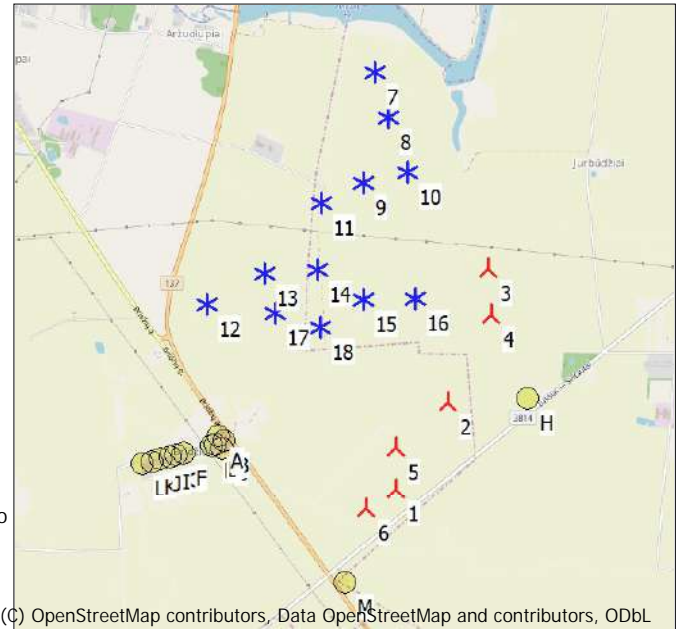
Obstacles used in calculation

Eye height for map: 1,5 m

Grid resolution: 1,0 m

All coordinates are in

Lithuanian TM LKS94-LKS94 (LT)



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL

Scale 1:50.000
New WTG Existing WTG Shadow receptor

WTGs

Y	X	Z	Row data/Description	WTG type		Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
				Valid	Manufact.					Calculation distance [m]	RPM
1	442.261	6.087.347	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
2	442.609	6.087.922	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
3	442.891	6.088.803	50,3 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
4	442.908	6.088.497	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
5	442.265	6.087.626	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
6	442.058	6.087.221	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
7	442.152	6.090.108	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
8	442.241	6.089.811	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
9	442.064	6.089.378	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
10	442.365	6.089.446	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
11	441.791	6.089.249	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
12	441.022	6.088.592	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
13	441.405	6.088.791	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
14	441.755	6.088.807	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
15	442.055	6.088.609	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
16	442.405	6.088.612	50,0 NORDEX N149/4.0-4....	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
17	441.469	6.088.526	50,0 GE WIND ENERGY 5....	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0
18	441.767	6.088.429	50,0 GE WIND ENERGY 5....	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0

Shadow receptor-Input

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

To be continued on next page...

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Main Result

Calculation: Suminis poveikis Enercon E82

...continued from previous page

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Calculation Results

Shadow receptor

Shadow, expected values

No. Shadow hours

per year
[h/year]

A	9:29
B	7:07
C	5:48
D	7:26
E	7:46
F	1:58
G	1:44
H	31:29
I	1:34
J	1:37
K	2:44
L	2:31
M	0:00

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Expected [h/year]
1	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (1)	13:58	3:43
2	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (2)	24:30	9:37
3	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)	0:00	0:00
4	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)	0:00	0:00
5	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)	14:21	4:46
6	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)	18:05	4:43
7	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)	0:00	0:00
8	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)	0:00	0:00
9	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)	0:00	0:00
10	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)	0:00	0:00
11	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)	0:00	0:00
12	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)	0:00	0:00
13	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)	0:00	0:00
14	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)	22:38	9:40
15	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)	32:58	13:47
16	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (11)	17:16	6:40
17	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)	8:59	4:11
18	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)	20:12	9:03

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June		
1	08:53 16:10	08:20 17:04	07:20 18:02	07:46 (1) 20:03	07:03 21:02	04:58 21:54	13	05:32 (16) 05:45 (16)
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (1) 20:05	07:00 21:03	04:57 21:56	14	05:31 (16) 05:45 (16)
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (1) 20:07	06:57 21:05	04:56 21:57	16	05:31 (16) 05:47 (16)
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (1) 20:09	06:55 21:07	04:55 21:58	17	05:30 (16) 05:47 (16)
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 20:11	06:52 21:09	04:55 21:59	18	05:30 (16) 05:48 (16)
6	08:51 16:17	08:11 17:14	07:08 18:12	07:36 (1) 20:13	06:50 21:11	04:54 22:00	19	05:30 (16) 05:49 (16)
7	08:51 16:18	08:09 17:16	07:06 18:14	07:36 (1) 20:15	06:47 21:13	04:53 22:01	19	05:30 (16) 05:49 (16)
8	08:50 16:19	08:07 17:18	07:03 18:16	07:39 (1) 20:17	06:45 21:15	04:52 22:02	20	05:29 (16) 05:49 (16)
9	08:50 16:21	08:05 17:21	07:01 18:18	07:46 (1) 20:19	06:42 21:17	04:52 22:03	20	05:30 (16) 05:50 (16)
10	08:49 16:22	08:03 17:23	06:58 18:20	07:39 (1) 20:21	06:40 21:19	04:51 22:04	21	05:30 (16) 05:51 (16)
11	08:48 16:24	08:01 17:25	06:56 18:22	07:36 (1) 20:23	06:37 21:20	04:51 22:05	21	05:29 (16) 05:50 (16)
12	08:47 16:26	07:59 17:27	06:53 18:24	07:39 (1) 20:25	06:35 21:22	04:50 22:06	21	05:30 (16) 05:51 (16)
13	08:46 16:27	07:57 17:29	06:51 18:26	07:36 (1) 20:27	06:33 21:24	04:50 22:07	22	05:30 (16) 05:52 (16)
14	08:46 16:29	07:55 17:31	08:22 (6) 18:28	06:30 20:29	05:24 21:26	04:50 22:07	22	05:29 (16) 05:51 (16)
15	08:45 16:31	07:53 17:33	08:19 (6) 18:30	06:46 20:31	05:23 21:28	04:49 22:08	22	05:30 (16) 05:52 (16)
16	08:44 16:33	07:50 17:35	08:17 (6) 18:32	06:43 20:33	05:21 21:29	04:49 22:09	22	05:30 (16) 05:52 (16)
17	08:42 16:34	07:48 17:37	08:15 (6) 18:34	06:41 20:34	05:19 21:31	04:49 22:09	22	05:30 (16) 05:52 (16)
18	08:41 16:36	07:46 17:39	08:12 (6) 18:36	06:38 20:36	05:17 21:33	04:49 22:10	22	05:30 (16) 05:52 (16)
19	08:40 16:38	07:44 17:42	08:10 (6) 18:38	06:36 20:38	05:16 21:35	04:49 22:10	23	05:30 (16) 05:53 (16)
20	08:39 16:40	07:41 17:44	08:10 (6) 18:40	06:33 20:40	05:14 21:36	04:49 22:10	23	05:30 (16) 05:53 (16)
21	08:38 16:42	07:39 17:46	08:10 (6) 18:42	06:31 20:42	05:13 21:38	04:49 22:11	23	05:31 (16) 05:54 (16)
22	08:36 16:44	07:37 17:48	08:11 (6) 18:44	06:28 20:44	05:11 21:40	04:49 22:11	23	05:31 (16) 05:54 (16)
23	08:35 16:46	07:35 17:50	08:12 (6) 18:46	06:25 20:46	05:10 21:41	04:49 22:11	23	05:31 (16) 05:54 (16)
24	08:33 16:48	07:32 17:52	08:14 (6) 18:48	06:23 20:48	05:08 21:43	04:50 22:11	23	05:31 (16) 05:54 (16)
25	08:32 16:50	07:30 17:54	08:22 (6) 18:50	06:20 20:50	05:07 21:44	04:50 22:11	22	05:32 (16) 05:54 (16)
26	08:30 16:52	07:28 17:56	08:18 (6) 18:52	06:18 20:52	05:05 21:46	04:51 22:11	22	05:32 (16) 05:54 (16)
27	08:29 16:54	07:25 17:58	08:15 (6) 18:54	06:15 20:54	05:04 21:47	04:51 22:11	22	05:33 (16) 05:55 (16)
28	08:27 16:56	07:23 18:00	07:48 (1) 18:56	06:13 20:56	05:03 21:49	04:52 22:11	22	05:32 (16) 05:54 (16)
29	08:26 16:58	07:21 17:58	07:49 (1) 19:58	06:10 20:58	05:02 21:50	04:52 22:10	22	05:33 (16) 05:55 (16)
30	08:24 17:00	07:19 17:56	07:47 (1) 20:00	06:08 21:00	05:00 21:52	04:53 22:10	21	05:34 (16) 05:55 (16)
31	08:22 17:02	07:17 17:54	07:45 (1) 20:01	06:06 21:02	04:59 21:53	04:53 22:10	21	05:55 (16) 05:55 (16)
Potential sun hours	244	270	366	422	499	517		
Total, worst case		135	178	36	23	620		
Sun reduction		0,24	0,34	0,39	0,52	0,48		
Oper. time red.		1,00	1,00	1,00	1,00	1,00		
Wind dir. red.		0,91	0,98	0,98	0,80	0,80		
Total reduction		0,23	0,34	0,39	0,42	0,39		
Total, real		30	61	14	10	245		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July		August		September		October		November		December	
1	04:54	05:33 (16)	05:36		06:33	07:02 (2)	07:29		07:30	08:27		
	22:10	05:55 (16)	21:32		20:23	07:11 (2)	19:07		16:53	16:06		
2	04:54	05:34 (16)	05:37		06:35	07:03 (2)	07:31		07:32	08:29		
	22:09	05:55 (16)	21:30		20:20	07:12 (2)	19:04		16:51	16:05		
3	04:55	05:35 (16)	05:39		06:36	07:05 (2)	07:32		07:34	08:30		
	22:09	05:55 (16)	21:29		20:18	07:12 (2)	19:01		16:49	16:05		
4	04:56	05:35 (16)	05:41		06:38	07:06 (2)	07:34		07:36	08:32		
	22:08	05:55 (16)	21:27		20:15	07:12 (2)	18:59		16:47	16:04		
5	04:57	05:36 (16)	05:43		06:40	07:08 (2)	07:36		08:17 (1)	07:38	08:34	
	22:08	05:55 (16)	21:25		20:13	07:11 (2)	18:56	4	08:21 (1)	16:45	16:03	
6	04:58	05:35 (16)	05:45		06:42	07:10 (2)	07:38		08:14 (1)	07:40	08:35	
	22:07	05:54 (16)	21:23		20:10	07:11 (2)	18:54	10	08:24 (1)	16:43	16:03	
7	04:59	05:36 (16)	05:46		06:44		07:40		08:12 (1)	07:42	08:36	
	22:06	05:54 (16)	21:21		20:08		18:51	13	08:25 (1)	16:41	16:02	
8	05:00	05:37 (16)	05:48		06:46		07:42		08:11 (1)	07:44	08:38	
	22:06	05:54 (16)	21:18		20:05		18:49	15	08:26 (1)	16:39	16:02	
9	05:01	05:37 (16)	05:50		06:48		07:44		08:12 (1)	07:46	08:39	
	22:05	05:54 (16)	21:16		20:03		18:46	14	08:26 (1)	16:37	16:01	
10	05:02	05:38 (16)	05:52		06:49		07:46		08:14 (1)	07:48	08:40	
	22:04	05:53 (16)	21:14		20:00		18:44	12	08:26 (1)	16:35	16:01	
11	05:03	05:40 (16)	05:54		06:51		07:48		08:16 (1)	07:50	08:41	
	22:03	05:54 (16)	21:12		19:58		18:41	9	08:25 (1)	16:34	16:01	
12	05:05	05:41 (16)	05:55		06:53		07:50		08:18 (1)	07:52	08:43	
	22:02	05:53 (16)	21:10		19:55		18:39	7	08:25 (1)	16:32	16:00	
13	05:06	05:42 (16)	05:57		06:55		07:52		08:20 (1)	07:54	08:44	
	22:01	05:51 (16)	21:08		19:53		18:37	3	08:23 (1)	16:30	16:00	
14	05:07	05:43 (16)	05:59		06:57		07:54		07:56	08:45		
	22:00	05:50 (16)	21:06		19:50		18:34		16:28	16:00		
15	05:08		06:01		06:59		07:56		07:58	08:46		
	21:59		21:03		19:47		18:32		16:27	16:00		
16	05:10		06:03		07:01	07:39 (5)	07:58		08:00	08:47		
	21:58		21:01		19:45	8	07:47 (5)	18:29		16:25	16:00	
17	05:11		06:05		07:02	07:37 (5)	08:00		08:48 (6)	08:02	08:47	
	21:56		20:59		19:42	12	07:49 (5)	18:27	3	08:51 (6)	16:23	16:00
18	05:13		06:07		07:04	07:36 (5)	08:02		08:44 (6)	08:04	08:48	
	21:55		20:57		19:40	14	07:50 (5)	18:25	10	08:54 (6)	16:22	16:00
19	05:14		06:08		07:06	07:34 (5)	08:04		08:42 (6)	08:06	08:49	
	21:54		20:54		19:37	15	07:49 (5)	18:22	14	08:56 (6)	16:20	16:01
20	05:16		06:10		07:08	07:35 (5)	08:06		08:41 (6)	08:08	08:50	
	21:52		20:52		19:35	14	07:49 (5)	18:20	16	08:57 (6)	16:19	16:01
21	05:17		06:12		07:10	07:37 (5)	08:08		08:40 (6)	08:10	08:50	
	21:51		20:50		19:32	12	07:49 (5)	18:18	17	08:57 (6)	16:18	16:01
22	05:19		06:14		07:12	07:39 (5)	08:10		08:40 (6)	08:12	08:51	
	21:49		20:47		19:30	9	07:48 (5)	18:15	18	08:58 (6)	16:16	16:02
23	05:20		06:16		07:14	07:41 (5)	08:12		08:41 (6)	08:13	08:51	
	21:48		20:45		19:27	7	07:48 (5)	18:13	17	08:58 (6)	16:15	16:02
24	05:22		06:18		07:16	07:43 (5)	08:14		08:43 (6)	08:15	08:52	
	21:46		20:42		19:24	3	07:46 (5)	18:11	14	08:57 (6)	16:14	16:03
25	05:24		06:20		07:17		07:16		07:45 (6)	08:17	08:52	
	21:45		20:40		19:22		17:08	12	07:57 (6)	16:12	16:04	
26	05:25		06:22		07:19		07:18		07:47 (6)	08:19	08:52	
	21:43		20:38		19:19		17:06	9	07:56 (6)	16:11	16:04	
27	05:27		06:23		07:21		07:20		07:49 (6)	08:21	08:53	
	21:41		20:35		19:17		17:04	6	07:55 (6)	16:10	16:05	
28	05:29		06:25		07:23		07:22		07:52 (6)	08:22	08:53	
	21:40		20:33		19:14		17:02	2	07:54 (6)	16:09	16:06	
29	05:30		06:27		07:25		07:24		08:24	08:53		
	21:38		20:30		19:12		17:00		16:08	16:07		
30	05:32		06:29		07:27		07:26		08:26	08:53		
	21:36		20:28		19:09		16:57		16:07	16:08		
31	05:34		06:31	07:05 (2)			07:28			08:53		
	21:34		20:25	3	07:08 (2)		16:55			16:09		
Potential sun hours	519		464		383		327		254		227	
Total, worst case	230		3		129		225					
Sun reduction	0,49		0,52		0,40		0,31					
Oper. time red.	1,00		1,00		1,00		1,00					
Wind dir. red.	0,80		0,98		1,00		0,93					
Total reduction	0,40		0,52		0,40		0,29					
Total, real	91		2		52		65					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (1) 07:46 (1)	07:00 20:05	05:48 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (1) 07:47 (1)	06:57 20:07	05:46 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (1) 07:47 (1)	06:55 20:09	05:44 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 07:48 (1)	06:52 20:11	05:42 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:47 (1)	06:50 20:13	05:40 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	07:31 (1) 07:46 (1)	06:47 20:15	05:38 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	07:32 (1) 07:46 (1)	06:45 20:17	05:36 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:32 (1) 07:44 (1)	06:42 20:19	05:34 22:03
10	08:49 16:22	08:03 17:23	06:58 18:20	07:34 (1) 07:42 (1)	06:40 20:21	05:32 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:02 (2) 07:09 (2)	05:30 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:00 (2) 07:09 (2)	05:28 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	06:57 (2) 07:07 (2)	05:26 22:07
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	06:58 (2) 07:06 (2)	05:24 22:07
15	08:45 16:31	07:53 17:33	08:19 (6) 08:21 (6)	06:46 18:30	06:28 20:31	04:49 22:08
16	08:44 16:33	07:50 17:35	08:17 (6) 08:23 (6)	06:43 18:32	06:25 20:33	04:49 22:09
17	08:42 16:34	07:48 17:37	08:15 (6) 08:24 (6)	06:41 18:34	06:23 20:34	04:49 22:09
18	08:41 16:36	07:46 17:39	08:12 (6) 08:24 (6)	06:38 18:36	06:20 20:36	04:49 22:10
19	08:40 16:38	07:44 17:42	08:10 (6) 08:25 (6)	06:36 18:38	06:18 20:38	04:49 22:10
20	08:39 16:40	07:41 17:44	08:08 (6) 08:26 (6)	06:33 18:40	06:16 20:40	04:49 22:10
21	08:38 16:42	07:39 17:46	08:06 (6) 08:25 (6)	06:31 18:42	06:13 20:42	04:49 22:11
22	08:36 16:44	07:37 17:48	08:07 (6) 08:25 (6)	06:28 18:44	06:11 20:44	04:49 22:11
23	08:35 16:46	07:35 17:50	08:07 (6) 08:24 (6)	06:25 18:46	06:09 20:46	04:49 22:11
24	08:33 16:48	07:32 17:52	08:08 (6) 08:23 (6)	06:23 18:48	06:06 20:48	04:50 22:11
25	08:32 16:50	07:30 17:54	08:08 (6) 08:21 (6)	06:20 18:50	06:04 20:50	04:50 22:11
26	08:30 16:52	07:28 17:56	08:11 (6) 08:19 (6)	06:18 18:52	06:02 20:52	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 18:54	06:40 (5) 06:56 (5)	05:59 20:54	04:51 22:11
28	08:27 16:56	07:23 18:00	06:13 18:56	06:41 (5) 06:56 (5)	05:57 20:56	04:52 22:11
29	08:26 16:58	07:21 18:02	06:11 18:58	07:41 (5) 07:54 (5)	05:55 20:58	04:52 22:10
30	08:24 17:00	07:19 18:01	07:08 19:00	07:43 (5) 07:52 (5)	05:53 21:00	04:53 22:10
31	08:22 17:02	07:17 18:00	07:05 19:01	07:41 (5) 07:50 (5)	05:51 21:00	04:53 22:10
Potential sun hours	244	270	366	422	499	517
Total, worst case			152	197	41	382
Sun reduction			0,24	0,34	0,39	0,48
Oper. time red.			1,00	1,00	1,00	1,00
Wind dir. red.			0,91	0,99	0,98	0,78
Total reduction			0,23	0,34	0,39	0,39
Total, real			35	67	16	147

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December				
1	04:54	05:30 (16)	05:36	06:33	07:01 (2)	07:29	07:30	08:27		
	22:10	05:44 (16)	21:32	20:23	07:08 (2)	19:07	16:53	16:06		
2	04:54	05:31 (16)	05:37	06:35	07:03 (2)	07:31	07:32	08:29		
	22:09	05:44 (16)	21:30	20:20	07:08 (2)	19:04	16:51	16:05		
3	04:55	05:32 (16)	05:39	06:36	07:05 (2)	07:32	08:13 (1)	07:34	08:30	
	22:09	05:44 (16)	21:29	20:18	07:07 (2)	19:01	08:19 (1)	16:49	16:05	
4	04:56	05:33 (16)	05:41	06:38	07:34	07:34	08:11 (1)	07:36	08:32	
	22:08	05:44 (16)	21:27	20:15	18:59	10	08:21 (1)	16:47	16:04	
5	04:57	05:34 (16)	05:43	06:40	07:36	08:09 (1)	07:38	08:33		
	22:08	05:44 (16)	21:25	20:13	18:56	13	08:22 (1)	16:45	16:03	
6	04:58	05:34 (16)	05:45	06:42	07:38	08:08 (1)	07:40	08:35		
	22:07	05:42 (16)	21:23	20:10	18:54	15	08:23 (1)	16:43	16:03	
7	04:59	05:36 (16)	05:46	06:44	07:40	08:08 (1)	07:42	08:36		
	22:06	05:40 (16)	21:21	20:08	18:51	15	08:23 (1)	16:41	16:02	
8	05:00	05:48	05:48	06:46	07:42	08:10 (1)	07:44	08:38		
	22:06	21:18	20:05	18:49	13	08:23 (1)	16:39	16:02		
9	05:01	05:50	06:48	07:44	08:12 (1)	07:46	08:39			
	22:05	21:16	20:03	18:46	11	08:23 (1)	16:37	16:01		
10	05:02	05:52	06:49	07:46	08:14 (1)	07:48	08:40			
	22:04	21:14	20:00	18:44	8	08:22 (1)	16:35	16:01		
11	05:03	05:54	06:51	07:48	08:16 (1)	07:50	08:41			
	22:03	21:12	19:58	18:41	5	08:21 (1)	16:34	16:01		
12	05:05	05:55	06:53	07:50	08:18 (1)	07:52	08:43			
	22:02	21:10	19:55	18:39	1	08:19 (1)	16:32	16:00		
13	05:06	05:57	06:55	07:52	07:52	07:54	08:44			
	22:01	21:08	19:53	8	07:43 (5)	18:37	16:30	16:00		
14	05:07	05:59	06:57	07:52	07:54	07:56	08:45			
	22:00	21:06	19:50	12	07:44 (5)	18:34	16:28	16:00		
15	05:08	06:01	06:59	07:51	07:56	08:46 (6)	07:58	08:46		
	21:59	21:03	19:47	14	07:45 (5)	18:32	3	08:49 (6)	16:27	16:00
16	05:10	06:03	07:01	07:30 (5)	07:58	08:42 (6)	08:00	08:47		
	21:58	21:01	19:45	16	07:46 (5)	18:29	10	08:52 (6)	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:40 (6)	08:02	08:47		
	21:56	20:59	19:42	16	07:46 (5)	18:27	14	08:54 (6)	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:39 (6)	08:04	08:48		
	21:55	20:57	19:40	14	07:46 (5)	18:25	16	08:55 (6)	16:22	16:00
19	05:14	06:08	07:06	07:33 (5)	08:04	08:38 (6)	08:06	08:49		
	21:54	20:54	19:37	11	07:44 (5)	18:22	17	08:55 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:37 (6)	08:08	08:50		
	21:52	20:52	19:35	8	07:43 (5)	18:20	18	08:55 (6)	16:19	16:01
21	05:17	06:12	07:10	07:37 (5)	08:08	08:37 (6)	08:10	08:50		
	21:51	20:50	19:32	5	07:42 (5)	18:18	18	08:55 (6)	16:18	16:01
22	05:19	06:14	07:12	07:39 (5)	08:10	08:39 (6)	08:12	08:51		
	21:49	20:47	19:30	1	07:40 (5)	18:15	17	08:56 (6)	16:16	16:02
23	05:20	06:16	07:14	08:12	08:12	08:41 (6)	08:13	08:51		
	21:48	20:45	19:27	18:13	14	08:55 (6)	16:15	16:02		
24	05:22	06:18	07:16	08:14	08:14	08:43 (6)	08:15	08:52		
	21:46	20:42	19:24	18:11	11	08:54 (6)	16:14	16:03		
25	05:24	06:20	07:17	07:16	07:16	07:45 (6)	08:17	08:52		
	21:45	20:40	19:22	17:08	8	07:53 (6)	16:12	16:04		
26	05:25	06:22	07:19	07:18	07:18	07:47 (6)	08:19	08:52		
	21:43	20:38	19:19	17:06	5	07:52 (6)	16:11	16:04		
27	05:27	06:23	07:21	07:20	07:20	07:49 (6)	08:21	08:53		
	21:41	20:35	19:17	17:04	1	07:50 (6)	16:10	16:05		
28	05:29	06:25	07:23	07:22	07:22	08:22	08:22	08:53		
	21:40	20:33	19:14	17:02	16:09	16:06				
29	05:30	06:27	06:59 (2)	07:25	07:24	08:24	08:53			
	21:38	20:30	8	07:07 (2)	19:12	17:00	16:08	16:07		
30	05:32	06:29	06:58 (2)	07:27	07:26	08:26	08:53			
	21:36	20:28	10	07:08 (2)	19:09	16:57	16:07	16:08		
31	05:34	06:31	06:59 (2)	07:28	07:28	08:53	08:53			
	21:34	20:25	9	07:08 (2)	16:55	16:09	16:09			
Potential sun hours	519	464	383	327	254	227				
Total, worst case	72	27	119	249						
Sun reduction	0,49	0,52	0,40	0,31						
Oper. time red.	1,00	1,00	1,00	1,00						
Wind dir. red.	0,78	0,98	1,00	0,94						
Total reduction	0,39	0,51	0,40	0,29						
Total, real	28	14	48	73						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:59 (6) 08:12 (6)	07:03 20:03	07:33 (5) 21:02
2	08:53 16:11	08:19 17:06	07:18 18:04	08:00 (6) 08:09 (6)	07:00 20:05	07:33 (5) 21:03
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:36 (5) 07:41 (5)	05:46 21:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:37 (1)	06:50 20:13	05:40 21:11
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 07:37 (1)	06:47 20:15	05:38 21:13
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 07:38 (1)	06:45 20:17	05:36 21:15
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 07:38 (1)	06:42 20:19	05:34 21:17
10	08:49 16:22	08:03 17:23	06:58 18:20	07:23 (1) 07:38 (1)	06:40 20:21	05:32 21:19
11	08:48 16:24	08:01 17:25	06:56 18:22	07:22 (1) 07:37 (1)	06:37 20:23	05:30 21:20
12	08:47 16:26	07:59 17:27	06:53 18:24	07:23 (1) 07:36 (1)	06:35 20:25	05:28 21:22
13	08:46 16:27	07:57 17:29	06:51 18:26	07:24 (1) 07:34 (1)	06:33 20:27	05:26 21:24
14	08:46 16:29	07:55 17:31	06:48 18:28	07:27 (1) 07:31 (1)	06:30 20:29	05:24 21:26
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	06:33 08:08 (6) 08:13 (6)	06:16 18:40	05:14 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	06:31 08:05 (6) 08:13 (6)	06:13 18:42	05:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	06:28 08:03 (6) 08:14 (6)	06:11 18:44	05:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	06:25 08:00 (6) 08:14 (6)	06:09 18:46	05:10 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	06:23 07:58 (6) 08:15 (6)	06:06 18:48	05:08 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	06:20 07:56 (6) 08:14 (6)	06:04 20:50	05:07 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	06:18 07:56 (6) 08:14 (6)	06:02 20:52	05:05 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 07:57 (6) 08:14 (6)	05:59 20:54	05:04 21:47	04:51 22:11
28	08:27 16:56	07:23 18:00	06:13 07:57 (6) 08:13 (6)	05:57 20:56	05:03 21:49	04:52 22:11
29	08:26 16:58	07:21 17:58	06:11 07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10
30	08:24 17:00	07:19 17:56	06:09 07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10
31	08:22 17:02	07:17 17:54	06:07 07:05 20:01	05:51 21:00	04:59 21:53	04:53 22:10
Potential sun hours	244	270	366	422	499	517
Total, worst case		124	187	68		239
Sun reduction		0,24	0,34	0,39		0,48
Oper. time red.		1,00	1,00	1,00		1,00
Wind dir. red.		0,93	0,98	0,98		0,77
Total reduction		0,23	0,34	0,39		0,38
Total, real		29	64	27		91

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December
1	04:54	05:29 (16)	05:36	06:33	07:29	08:02 (1)
	22:10	05:37 (16)	21:32	20:23	19:07	08:15 (1)
2	04:54	05:31 (16)	05:37	06:35	07:31	08:01 (1)
	22:09	05:37 (16)	21:30	20:20	19:04	08:15 (1)
3	04:55	05:33 (16)	05:39	06:36	07:32	08:00 (1)
	22:09	05:35 (16)	21:29	20:18	19:01	08:16 (1)
4	04:56		05:41	06:38	07:34	08:02 (1)
	22:08		21:27	20:15	18:59	08:16 (1)
5	04:57		05:43	06:40	07:36	08:04 (1)
	22:08		21:25	20:13	18:56	08:15 (1)
6	04:58		05:45	06:42	07:38	08:06 (1)
	22:07		21:23	20:10	18:54	08:15 (1)
7	04:59		05:46	06:44	07:40	08:08 (1)
	22:06		21:21	20:08	18:51	08:14 (1)
8	05:00		05:48	06:46	07:42	08:10 (1)
	22:06		21:18	20:05	18:49	08:12 (1)
9	05:01		05:50	06:48	07:44	08:12 (1)
	22:05		21:16	20:03	07:34 (5)	18:46
10	05:02		05:52	06:49	07:46	08:12 (1)
	22:04		21:14	20:00	07:37 (5)	18:44
11	05:03		05:54	06:51	07:48	08:36 (6)
	22:03		21:12	19:58	07:38 (5)	18:41
12	05:05		05:55	06:53	07:50	08:33 (6)
	22:02		21:10	19:55	07:39 (5)	18:39
13	05:06		05:57	06:55	07:52	08:31 (6)
	22:01		21:08	19:53	07:39 (5)	18:37
14	05:07		05:59	06:57	07:54	08:30 (6)
	22:00		21:06	19:50	07:38 (5)	18:34
15	05:09		06:01	06:59	07:56	08:29 (6)
	21:59		21:03	19:47	07:38 (5)	18:32
16	05:10		06:03	07:01	07:58	08:28 (6)
	21:58		21:01	19:45	07:37 (5)	18:29
17	05:11		06:05	07:02	08:00	08:28 (6)
	21:56		20:59	19:42	07:36 (5)	18:27
18	05:13		06:07	07:04	08:02	08:30 (6)
	21:55		20:57	19:40	07:35 (5)	18:25
19	05:14		06:08	07:06	08:04	08:32 (6)
	21:54		20:54	19:37	18:22	13
20	05:16		06:10	07:08	08:06	08:34 (6)
	21:52		20:52	19:35	18:20	10
21	05:17		06:12	07:10	08:08	08:36 (6)
	21:51		20:50	19:32	18:18	7
22	05:19		06:14	07:12	08:10	08:39 (6)
	21:49		20:47	19:30	18:15	3
23	05:20		06:16	07:14	08:12	08:42 (6)
	21:48		20:45	19:27	18:13	
24	05:22		06:18	07:16	08:14	08:15
	21:46		20:42	19:24	18:11	
25	05:24		06:20	07:17	08:16	08:17
	21:45		20:40	19:22	17:08	
26	05:25		06:22	07:19	08:19	08:19
	21:43		20:38	19:19	17:06	
27	05:27		06:23	07:21	08:21	08:21
	21:41		20:35	19:17	17:04	
28	05:29		06:25	07:23	08:22	08:22
	21:40		20:33	19:14	17:02	
29	05:30		06:27	07:25	08:24	08:24
	21:38		20:30	19:12	17:00	
30	05:32		06:29	07:27	08:26	08:26
	21:36		20:28	19:09	16:57	
31	05:34		06:31	07:29	08:28	08:28
	21:34		20:25	19:07	16:55	
Potential sun hours	519	464	383	327	254	227
Total, worst case	16	38	111	234		
Sun reduction	0,49	0,52	0,40	0,31		
Oper. time red.	1,00	1,00	1,00	1,00		
Wind dir. red.	0,77	0,97	1,00	0,95		
Total reduction	0,38	0,51	0,40	0,30		
Total, real	6	19	44	69		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June						
1	08:53	08:20	07:20	08:06 (6)	07:03	05:51						
	16:10	17:04	18:02	2	08:08 (6)	20:03	21:02	21:54				
2	08:53	08:19	07:18		07:00	05:48	04:57	05:30 (16)				
	16:11	17:06	18:04		20:05	21:03	21:56	7	05:37 (16)			
3	08:52	08:17	07:16		06:57	05:46	04:56		05:30 (16)			
	16:13	17:08	18:06		20:07	21:05	21:57	9	05:39 (16)			
4	08:52	08:15	07:13	07:38 (1)	06:55	05:44	04:55		05:29 (16)			
	16:14	17:10	18:08	2	07:40 (1)	20:09	21:07	21:58	11	05:40 (16)		
5	08:52	08:13	07:11	07:36 (1)	06:52	05:42	04:55		05:28 (16)			
	16:15	17:12	18:10	5	07:41 (1)	20:11	21:09	21:59	13	05:41 (16)		
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40	04:54		05:28 (16)			
	16:17	17:14	18:12	8	07:41 (1)	20:13	21:11	22:00	14	05:42 (16)		
7	08:51	08:09	07:06	07:30 (1)	06:47	05:38	04:53		05:27 (16)			
	16:18	17:16	18:14	11	07:41 (1)	20:15	21:13	22:01	16	05:43 (16)		
8	08:50	08:07	07:03	07:28 (1)	06:45	05:36	04:52		05:27 (16)			
	16:19	17:18	18:16	13	07:41 (1)	20:17	21:15	22:02	16	05:43 (16)		
9	08:50	08:05	07:01	07:25 (1)	06:42	05:34	04:52		05:27 (16)			
	16:21	17:21	18:18	15	07:40 (1)	20:19	21:17	22:03	17	05:44 (16)		
10	08:49	08:03	06:58	07:26 (1)	06:40	05:32	04:51		05:27 (16)			
	16:22	17:23	18:20	13	07:39 (1)	20:21	21:19	22:04	18	05:45 (16)		
11	08:48	08:01	06:56	07:27 (1)	06:37	05:30	04:51		05:26 (16)			
	16:24	17:25	18:22	10	07:37 (1)	20:23	21:20	22:05	18	05:44 (16)		
12	08:47	07:59	06:53	07:30 (1)	06:35	05:28	04:50		05:27 (16)			
	16:26	17:27	18:24	5	07:35 (1)	20:25	21:22	22:06	18	05:45 (16)		
13	08:46	07:57	06:51		06:33	05:26	04:50		05:27 (16)			
	16:27	17:29	18:26		20:27	21:24	22:07	19	05:46 (16)			
14	08:46	07:55	06:48		06:30	05:24	04:50		05:26 (16)			
	16:29	17:31	18:28		20:29	21:26	22:07	19	05:45 (16)			
15	08:45	07:53	06:46		06:28	05:23	04:49		05:26 (16)			
	16:31	17:33	18:30		20:31	21:28	22:08	20	05:46 (16)			
16	08:44	07:50	06:43		06:25	05:21	04:49		05:27 (16)			
	16:33	17:35	18:32		20:33	21:29	22:09	19	05:46 (16)			
17	08:42	07:48	06:41		06:23	05:19	04:49		05:27 (16)			
	16:34	17:37	18:34		20:34	21:31	22:09	20	05:47 (16)			
18	08:41	07:46	06:38		06:20	05:17	04:49		05:27 (16)			
	16:36	17:39	18:36		20:36	21:33	22:10	20	05:47 (16)			
19	08:40	07:44	08:10 (6)	06:36	06:18	05:16	04:49		05:27 (16)			
	16:38	17:42	5	08:15 (6)	18:38	20:38	21:35	22:10	20	05:47 (16)		
20	08:39	07:41	08:08 (6)	06:33	06:16	05:14	04:49		05:27 (16)			
	16:40	17:44	8	08:16 (6)	18:40	20:40	21:36	22:10	20	05:47 (16)		
21	08:38	07:39	08:05 (6)	06:31	06:13	05:13	04:49		05:28 (16)			
	16:42	17:46	11	08:16 (6)	18:42	20:42	21:38	22:11	20	05:48 (16)		
22	08:36	07:37	08:03 (6)	06:28	06:11	05:11	04:49		05:28 (16)			
	16:44	17:48	14	08:17 (6)	18:44	20:44	21:40	22:11	20	05:48 (16)		
23	08:35	07:35	08:00 (6)	06:25	06:50 (5)	06:09	05:10	04:49		05:28 (16)		
	16:46	17:50	16	08:16 (6)	18:46	3	06:53 (5)	20:46	21:41	22:11	20	05:48 (16)
24	08:33	07:32	07:59 (6)	06:23	06:47 (5)	06:06	05:08	04:50		05:28 (16)		
	16:48	17:52	17	08:16 (6)	18:48	6	06:53 (5)	20:48	21:43	22:11	20	05:48 (16)
25	08:32	07:30	07:59 (6)	06:20	06:44 (5)	06:04	05:07	04:50		05:29 (16)		
	16:50	17:54	16	08:15 (6)	18:50	9	06:53 (5)	20:50	21:44	22:11	20	05:49 (16)
26	08:30	07:28	08:00 (6)	06:18	06:42 (5)	06:02	05:05	04:51		05:29 (16)		
	16:52	17:56	15	08:15 (6)	18:52	12	06:54 (5)	20:52	21:46	22:11	19	05:48 (16)
27	08:29	07:25	08:01 (6)	06:15	06:39 (5)	05:59	05:04	04:51		05:30 (16)		
	16:54	17:58	13	08:14 (6)	18:54	14	06:53 (5)	20:54	21:47	22:11	19	05:49 (16)
28	08:27	07:23	08:02 (6)	06:13	06:38 (5)	05:57	05:03	04:52		05:29 (16)		
	16:56	18:00	10	08:12 (6)	18:56	15	06:53 (5)	20:56	21:49	22:11	20	05:49 (16)
29	08:26			07:10	07:37 (5)	05:55	05:02	04:52		05:30 (16)		
	16:58			19:58	14	07:51 (5)	20:58	21:50	22:10	19	05:49 (16)	
30	08:24			07:08	07:39 (5)	05:53	05:00	04:53		05:31 (16)		
	17:00			20:00	11	07:50 (5)	21:00	21:52	22:10	18	05:49 (16)	
31	08:22			07:05	07:40 (5)		04:59					
	17:02			20:01	7	07:47 (5)	21:53					
Potential sun hours	244	270	366		422	499		517				
Total, worst case			125		175			509				
Sun reduction			0,24		0,34			0,48				
Oper. time red.			1,00		1,00			1,00				
Wind dir. red.			0,93		0,99			0,79				
Total reduction			0,23		0,34			0,39				
Total, real			29		60			199				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December
1	04:54	05:31 (16)	05:36	06:33	07:29	07:30
	22:10	05:49 (16)	21:32	20:23	19:07	16:53
2	04:54	05:31 (16)	05:37	06:35	07:31	08:07 (1)
	22:09	05:49 (16)	21:30	20:20	19:04	16:51
3	04:55	05:32 (16)	05:39	06:36	07:32	08:05 (1)
	22:09	05:49 (16)	21:29	20:18	19:01	16:49
4	04:56	05:33 (16)	05:41	06:38	07:34	08:04 (1)
	22:08	05:49 (16)	21:27	20:15	18:59	16:47
5	04:57	05:33 (16)	05:43	06:40	07:36	08:04 (1)
	22:08	05:49 (16)	21:25	20:13	18:56	16:45
6	04:58	05:33 (16)	05:45	06:42	07:38	08:06 (1)
	22:07	05:48 (16)	21:23	20:10	18:54	16:43
7	04:59	05:34 (16)	05:46	06:44	07:40	08:08 (1)
	22:06	05:48 (16)	21:21	20:08	18:51	16:41
8	05:00	05:35 (16)	05:48	06:46	07:42	08:10 (1)
	22:06	05:47 (16)	21:18	20:05	18:49	16:39
9	05:01	05:36 (16)	05:50	06:48	07:44	08:12 (1)
	22:05	05:46 (16)	21:16	20:03	18:46	16:37
10	05:02	05:37 (16)	05:52	06:49	07:46	07:48
	22:04	05:45 (16)	21:14	20:00	18:44	16:35
11	05:03	05:40 (16)	05:54	06:51	07:48	07:50
	22:03	05:44 (16)	21:12	19:58	18:41	16:34
12	05:05	05:55	06:53	07:33 (5)	07:50	07:52
	22:02	21:10	19:55	6 07:39 (5)	18:39	16:32
13	05:06	05:57	06:55	07:30 (5)	07:52	08:37 (6)
	22:01	21:08	19:53	11 07:41 (5)	18:37	7 08:44 (6)
14	05:07	05:59	06:57	07:28 (5)	07:54	08:34 (6)
	22:00	21:06	19:50	13 07:41 (5)	18:34	12 08:46 (6)
15	05:09	06:01	06:59	07:27 (5)	07:56	08:33 (6)
	21:59	21:03	19:47	15 07:42 (5)	18:32	14 08:47 (6)
16	05:10	06:03	07:01	07:28 (5)	07:58	08:31 (6)
	21:58	21:01	19:45	14 07:42 (5)	18:29	17 08:48 (6)
17	05:11	06:05	07:02	07:30 (5)	08:00	08:31 (6)
	21:56	20:59	19:42	12 07:42 (5)	18:27	17 08:48 (6)
18	05:13	06:07	07:04	07:32 (5)	08:02	08:30 (6)
	21:55	20:57	19:40	10 07:42 (5)	18:25	18 08:48 (6)
19	05:14	06:08	07:06	07:33 (5)	08:04	08:32 (6)
	21:54	20:54	19:37	7 07:40 (5)	18:22	15 08:47 (6)
20	05:16	06:10	07:08	07:35 (5)	08:06	08:34 (6)
	21:52	20:52	19:35	4 07:39 (5)	18:20	13 08:47 (6)
21	05:17	06:12	07:10	08:08	08:36 (6)	08:10
	21:51	20:50	19:32	18:18	10 08:46 (6)	16:18
22	05:19	06:14	07:12	08:10	08:39 (6)	08:12
	21:49	20:47	19:30	18:15	7 08:46 (6)	16:16
23	05:20	06:16	07:14	08:12	08:41 (6)	08:13
	21:48	20:45	19:27	18:13	3 08:44 (6)	16:15
24	05:22	06:18	07:16	08:14	08:44 (6)	08:15
	21:46	20:42	19:24	18:11		16:14
25	05:24	06:20	07:17	07:16	08:17	08:52
	21:45	20:40	19:22	17:08		16:12
26	05:25	06:22	07:19	07:18	08:19	08:52
	21:43	20:38	19:19	17:06		16:11
27	05:27	06:23	07:21	07:20	08:21	08:53
	21:41	20:35	19:17	17:04		16:10
28	05:29	06:25	07:23	07:22	08:22	08:53
	21:40	20:33	19:14	17:02		16:09
29	05:30	06:27	07:25	07:24	08:24	08:53
	21:38	20:30	19:12	17:00		16:08
30	05:32	06:29	07:27	07:26	08:26	08:53
	21:36	20:28	19:09	16:57		16:07
31	05:34	06:31		07:28		08:53
	21:34	20:25		16:55		16:09
Potential sun hours	519	464	383	327	254	227
Total, worst case	148		92		214	
Sun reduction	0,49		0,40		0,31	
Oper. time red.	1,00		1,00		1,00	
Wind dir. red.	0,79		1,00		0,95	
Total reduction	0,39		0,40		0,30	
Total, real	58		37		63	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	05:51 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	05:48 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	05:46 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	05:40 21:11	04:54 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	05:38 21:13	04:53 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	05:36 21:15	04:52 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	05:34 21:17	04:52 22:03
10	08:49 16:22	08:03 17:23	06:58 18:20	06:40 20:21	05:32 21:19	04:51 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	05:30 21:20	04:51 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	05:28 21:22	04:50 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	05:26 21:24	04:50 22:07
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	05:24 21:26	04:50 22:07
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	05:14 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	05:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	05:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	05:10 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	05:08 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	05:07 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	05:05 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 18:54	06:00 20:54	05:04 21:47	04:51 22:11
28	08:27 16:56	07:23 18:00	06:13 18:56	05:57 20:56	05:03 21:49	04:52 22:11
29	08:26 16:58	07:21 18:02	06:11 18:58	05:55 20:58	05:02 21:50	04:52 22:10
30	08:24 17:00	07:19 18:04	06:09 19:00	05:53 21:00	05:00 21:52	04:53 22:10
31	08:22 17:02	07:17 18:06	06:07 19:02	05:51 21:02	04:59 21:53	05:32 (16) 05:37 (16)
Potential sun hours	244	270	366	422	499	517
Total, worst case		108	173		5	552
Sun reduction		0,24	0,34		0,52	0,48
Oper. time red.		1,00	1,00		1,00	1,00
Wind dir. red.		0,94	0,98		0,79	0,79
Total reduction		0,23	0,34		0,42	0,39
Total, real		25	59		2	217

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December					
1	04:54	05:31 (16)	05:36	06:33	07:29	08:05 (1)	07:30	08:27			
	22:10	05:50 (16)	21:32	20:23	19:07	8	08:13 (1)	16:53	16:06		
2	04:54	05:32 (16)	05:37	06:35	07:31	08:03 (1)	07:32	08:29			
	22:09	05:51 (16)	21:30	20:20	19:04	11	08:14 (1)	16:51	16:05		
3	04:55	05:32 (16)	05:39	06:36	07:32	08:02 (1)	07:34	08:30			
	22:09	05:51 (16)	21:29	20:18	19:01	13	08:15 (1)	16:49	16:05		
4	04:56	05:33 (16)	05:41	06:38	07:34	08:02 (1)	07:36	08:32			
	22:08	05:51 (16)	21:27	20:15	18:59	13	08:15 (1)	16:47	16:04		
5	04:57	05:34 (16)	05:43	06:40	07:36	08:04 (1)	07:38	08:34			
	22:08	05:51 (16)	21:25	20:13	18:56	11	08:15 (1)	16:45	16:03		
6	04:58	05:33 (16)	05:45	06:42	07:38	08:06 (1)	07:40	08:35			
	22:07	05:50 (16)	21:23	20:10	18:54	9	08:15 (1)	16:43	16:03		
7	04:59	05:34 (16)	05:46	06:44	07:40	08:08 (1)	07:42	08:36			
	22:06	05:50 (16)	21:21	20:08	18:51	6	08:14 (1)	16:41	16:02		
8	05:00	05:35 (16)	05:48	06:46	07:42	08:10 (1)	07:44	08:38			
	22:06	05:49 (16)	21:18	20:05	18:49	3	08:13 (1)	16:39	16:02		
9	05:01	05:35 (16)	05:50	06:48	07:44		07:46	08:39			
	22:05	05:49 (16)	21:16	20:03	18:46		16:37	16:01			
10	05:02	05:36 (16)	05:52	06:49	07:46		07:48	08:40			
	22:04	05:48 (16)	21:14	20:00	18:44		16:35	16:01			
11	05:03	05:38 (16)	05:54	06:51	07:48		07:50	08:41			
	22:03	05:48 (16)	21:12	19:58	18:41		16:34	16:01			
12	05:05	05:40 (16)	05:55	06:53	07:50	08:33 (6)	07:52	08:43			
	22:02	05:47 (16)	21:10	19:55	8	07:38 (5)	18:39	8	08:41 (6)	16:32	16:00
13	05:06		05:57	06:55	07:28 (5)	07:52	08:30 (6)	07:54	08:44		
	22:01		21:08	19:53	12	07:40 (5)	18:37	13	08:43 (6)	16:30	16:00
14	05:07		05:59	06:57	07:26 (5)	07:54	08:29 (6)	07:56	08:45		
	22:00		21:06	19:50	14	07:40 (5)	18:34	15	08:44 (6)	16:28	16:00
15	05:09		06:01	06:59	07:26 (5)	07:56	08:28 (6)	07:58	08:46		
	21:59		21:03	19:47	14	07:40 (5)	18:32	16	08:44 (6)	16:27	16:00
16	05:10		06:03	07:01	07:28 (5)	07:58	08:27 (6)	08:00	08:47		
	21:58		21:01	19:45	12	07:40 (5)	18:29	17	08:44 (6)	16:25	16:00
17	05:11		06:05	07:02	07:30 (5)	08:00	08:28 (6)	08:02	08:47		
	21:56		20:59	19:42	10	07:40 (5)	18:27	16	08:44 (6)	16:23	16:00
18	05:13		06:07	07:04	07:32 (5)	08:02	08:30 (6)	08:04	08:48		
	21:55		20:57	19:40	7	07:39 (5)	18:25	14	08:44 (6)	16:22	16:00
19	05:14		06:08	07:06	07:33 (5)	08:04	08:32 (6)	08:06	08:49		
	21:54		20:54	19:37	4	07:37 (5)	18:22	11	08:43 (6)	16:20	16:01
20	05:16		06:10	07:08	07:35 (5)	08:06	08:34 (6)	08:08	08:50		
	21:52		20:52	19:35	1	07:36 (5)	18:20	8	08:42 (6)	16:19	16:01
21	05:17		06:12	07:10		08:08	08:36 (6)	08:10	08:50		
	21:51		20:50	19:32		18:18	5	08:41 (6)	16:18	16:01	
22	05:19		06:14	07:12		08:10	08:39 (6)	08:12	08:51		
	21:49		20:47	19:30		18:15	1	08:40 (6)	16:16	16:02	
23	05:20		06:16	07:14		08:12		08:13	08:51		
	21:48		20:45	19:27		18:13		16:15	16:02		
24	05:22		06:18	07:16		08:14		08:15	08:52		
	21:46		20:42	19:24		18:11		16:14	16:03		
25	05:24		06:20	07:17		07:16		08:17	08:52		
	21:45		20:40	19:22		17:08		16:12	16:04		
26	05:25		06:22	07:19		07:18		08:19	08:52		
	21:43		20:38	19:19		17:06		16:11	16:04		
27	05:27		06:23	07:21		07:20		08:21	08:53		
	21:41		20:35	19:17		17:04		16:10	16:05		
28	05:29		06:25	07:23		07:22		08:22	08:53		
	21:40		20:33	19:14		17:02		16:09	16:06		
29	05:30		06:27	07:25		07:24		08:24	08:53		
	21:38		20:30	19:12		17:00		16:08	16:07		
30	05:32		06:29	07:27		07:26		08:26	08:53		
	21:36		20:28	19:09		16:57		16:07	16:08		
31	05:34		06:31			07:28			08:53		
	21:34		20:25			16:55			16:09		
Potential sun hours	519	464	383		327		254		227		
Total, worst case	182			82		198					
Sun reduction	0,49			0,40		0,31					
Oper. time red.	1,00			1,00		1,00					
Wind dir. red.	0,79			1,00		0,95					
Total reduction	0,39			0,40		0,30					
Total, real	72			33		59					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6) Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December	
1	08:53 16:10	08:20 17:04	07:20 18:02	07:03 20:03	07:29 (5) 21:02	05:51 21:54	04:58 22:10	04:54 21:32	05:36 20:23	06:33 19:07	07:29 19:07	07:56 (1) 16:53	07:30 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:00 20:05	07:29 (5) 21:03	05:48 21:56	04:57 22:09	04:54 21:30	05:37 20:20	06:35 19:04	07:31 19:04	07:58 (1) 16:51	07:32 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:41 (6) 21:05	05:46 21:57	04:56 22:09	04:55 21:29	05:39 20:18	06:36 19:01	07:33 19:01	08:01 (1) 16:51	07:34 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	07:38 (6) 21:07	05:44 21:58	04:55 22:08	04:56 21:27	05:41 20:15	06:38 18:59	07:34 18:59	08:01 (1) 16:51	07:36 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	07:36 (6) 21:09	05:42 21:59	04:57 22:08	05:43 21:25	06:40 20:13	07:36 18:56	07:36 18:56	08:15 (6) 16:43	07:38 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	06:50 20:13	07:37 (6) 21:11	05:40 22:00	04:54 22:07	05:45 21:23	06:42 20:10	07:38 18:54	07:38 18:54	08:15 (6) 16:43	07:40 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	06:47 20:15	07:49 (6) 21:13	05:38 22:01	04:53 22:06	04:59 21:21	06:44 20:08	07:40 18:51	07:40 18:51	08:13 (6) 16:41	07:42 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	06:45 20:17	07:48 (6) 21:15	05:36 22:02	04:52 22:06	05:00 21:18	06:46 20:05	07:42 18:49	07:42 18:49	08:12 (6) 16:39	07:44 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	06:42 20:19	07:44 (6) 21:17	05:34 22:03	04:52 22:05	05:01 21:16	06:48 20:03	07:44 18:46	07:44 18:46	08:12 (6) 16:37	07:46 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	06:40 20:21	08:49 21:19	05:32 22:04	04:51 22:04	05:02 21:14	06:49 20:00	07:44 18:44	07:44 18:44	08:14 (6) 16:35	07:48 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	06:37 20:23	07:20 (1) 21:20	05:30 22:05	04:51 22:03	05:54 21:12	06:51 19:58	07:21 (5) 18:42	07:21 (5) 18:42	08:16 (6) 16:34	07:50 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	06:35 20:25	07:18 (1) 21:22	05:28 22:06	04:50 22:02	05:05 21:10	06:53 19:55	07:21 (5) 18:39	07:21 (5) 18:39	08:18 (6) 16:32	07:52 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	06:33 20:27	07:15 (1) 21:24	05:26 22:07	04:50 22:01	05:06 21:08	06:55 19:53	07:23 (5) 18:37	07:23 (5) 18:37	08:20 (6) 16:30	07:54 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	06:30 20:29	07:13 (1) 21:26	05:24 22:07	04:50 22:00	05:07 21:06	06:57 19:50	07:24 (5) 18:34	07:24 (5) 18:34	08:24 (6) 16:30	07:56 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	07:10 (1) 21:28	05:23 22:08	04:49 21:59	06:01 21:03	06:59 19:47	07:26 (5) 18:32	07:26 (5) 18:32	08:25 (6) 16:34	07:58 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	07:11 (1) 21:29	05:21 22:09	04:49 21:58	06:03 21:01	07:01 19:45	07:28 (5) 18:29	07:28 (5) 18:29	08:26 (6) 16:32	07:58 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	07:14 (1) 21:31	05:19 22:09	04:49 21:56	06:05 20:59	07:02 19:42	08:00 18:27	08:00 18:27	08:28 (6) 16:30	08:02 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	07:16 (1) 21:33	05:17 22:10	04:49 21:55	06:07 20:57	07:04 19:40	08:02 18:25	08:02 18:25	08:30 (6) 16:32	08:04 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	07:18 (1) 21:35	05:16 22:10	04:49 21:54	06:14 20:54	07:06 19:37	08:04 18:22	08:04 18:22	08:32 (6) 16:30	08:06 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	06:16 20:40	07:20 (1) 21:36	05:14 22:10	04:49 21:52	06:10 20:52	07:08 19:35	08:06 18:20	08:06 18:20	08:34 (6) 16:30	08:08 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	06:13 20:42	07:22 (1) 21:38	05:13 22:11	04:49 21:51	06:12 20:50	07:10 19:32	08:08 18:18	08:08 18:18	08:36 (6) 16:30	08:10 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	06:11 20:44	07:24 (1) 21:40	05:11 22:11	04:49 21:49	06:14 20:47	07:12 19:30	08:10 18:15	08:10 18:15	08:38 (6) 16:30	08:12 16:02
23	08:35 16:46	07:35 17:50	06:25 18:46	06:09 20:46	07:26 (1) 21:41	05:10 22:11	04:49 21:48	06:16 20:45	07:14 19:27	08:12 18:13	08:12 18:13	08:40 (6) 16:30	08:13 16:02
24	08:33 16:48	07:32 17:52	06:23 18:48	06:06 20:48	07:28 (1) 21:43	05:08 22:11	04:50 21:46	06:18 20:42	07:16 19:24	08:14 18:11	08:14 18:11	08:42 (6) 16:30	08:15 16:03
25	08:32 16:50	07:30 17:54	06:20 18:50	06:04 20:50	07:30 (1) 21:44	05:07 22:11	04:50 21:45	06:20 20:40	07:17 19:22	08:16 18:08	08:16 18:08	08:44 (6) 16:30	08:17 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	06:02 20:52	07:32 (1) 21:46	05:05 22:11	04:51 21:43	06:22 20:38	07:19 19:19	08:18 18:06	08:18 18:06	08:46 (6) 16:30	08:19 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	05:59 20:54	07:34 (1) 21:47	05:04 22:11	04:51 21:41	06:23 20:35	07:21 19:17	08:19 18:04	08:19 18:04	08:48 (6) 16:30	08:21 16:05
28	08:27 16:56	07:23 18:00	07:48 (6) 18:56	05:57 20:56	06:37 (5) 21:49	05:03 22:11	04:52 21:40	06:25 20:33	07:23 19:14	08:21 (1) 17:02	08:21 (1) 17:02	08:50 (6) 16:30	08:22 16:05
29	08:26 16:58	07:21 18:02	07:50 (6) 18:56	05:55 20:58	07:34 (5) 21:50	05:02 22:10	04:52 21:38	06:27 20:30	07:25 19:12	08:22 (1) 17:00	08:22 (1) 17:00	08:52 (6) 16:30	08:24 16:07
30	08:24 17:00	07:18 18:03	07:58 (6) 19:00	05:53 21:00	07:32 (5) 21:52	05:00 22:10	04:53 21:36	06:29 20:28	07:27 19:09	08:24 (1) 16:57	08:24 (1) 16:57	08:54 (6) 16:30	08:26 16:08
31	08:22 17:02	07:16 18:05	07:59 (6) 19:01	05:51 21:00	07:29 (5) 21:53	04:59 21:53	05:34 21:34	06:31 20:25	07:28 16:55	08:26 (1) 16:55	08:26 (1) 16:55	08:56 (6) 16:30	08:28 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227	
Total, worst case			153	17					86	88			
Sun reduction		0,24	0,34	0,39					0,40	0,31			
Oper. time red.		1,00	1,00	1,00					1,00	1,00			
Wind dir. red.		0,96	0,98	1,00					1,00	0,97			
Total reduction		0,24	0,33	0,39					0,39	0,30			
Total, real		0	51	7					34	26			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: G - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (7)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, shadow reduction, and operational time. Includes summary rows for 'Potential sun hours', 'Total, worst case', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June										
1	08:53	08:20	16:27 (1)	07:20	17:11 (5)	07:02	18:47 (2)	05:50	20:00 (18)	04:58	20:39 (15)					
	16:10	17:04	4	16:31 (1)	18:02	21	17:32 (5)	20:03	35	19:22 (2)	21:01	25	20:25 (18)	21:54	30	21:09 (14)
2	08:53	08:19	16:26 (1)	07:18	17:12 (5)	07:00	18:46 (2)	05:48	20:00 (18)	04:57	20:39 (15)					
	16:11	17:06	7	16:33 (6)	18:04	20	17:32 (5)	20:05	36	19:22 (2)	21:03	25	20:25 (18)	21:56	30	21:09 (14)
3	08:52	08:17	16:26 (1)	07:15	17:11 (5)	06:57	18:46 (2)	05:46	19:59 (18)	04:56	20:39 (15)					
	16:13	17:08	9	16:35 (6)	18:06	20	17:31 (5)	20:07	36	19:22 (2)	21:05	26	20:25 (18)	21:57	30	21:09 (14)
4	08:52	08:15	16:25 (1)	07:13	17:12 (5)	06:55	18:46 (2)	05:44	19:59 (18)	04:55	20:39 (15)					
	16:14	17:10	12	16:37 (6)	18:08	19	17:31 (5)	20:09	35	19:21 (2)	21:07	26	20:25 (18)	21:58	31	21:10 (14)
5	08:52	08:13	16:25 (1)	07:11	17:13 (5)	06:52	18:46 (2)	05:42	19:59 (18)	04:54	20:39 (15)					
	16:15	17:12	15	16:40 (6)	18:10	16	17:29 (5)	20:11	35	19:21 (2)	21:09	26	20:25 (18)	21:59	30	21:10 (14)
6	08:51	08:11	16:25 (1)	07:08	17:14 (5)	06:50	18:46 (2)	05:40	19:59 (18)	04:54	20:39 (15)					
	16:16	17:14	17	16:42 (6)	18:12	14	17:28 (5)	20:13	34	19:20 (2)	21:11	25	20:24 (18)	22:00	30	21:09 (14)
7	08:51	08:09	16:25 (1)	07:06	17:16 (5)	06:47	18:46 (2)	05:38	19:59 (18)	04:53	20:39 (15)					
	16:18	17:16	20	16:45 (6)	18:14	9	17:25 (5)	20:15	33	19:19 (2)	21:13	25	20:24 (18)	22:01	31	21:10 (14)
8	08:50	08:07	16:26 (1)	07:03	17:28 (5)	06:45	18:46 (2)	05:36	19:59 (18)	04:52	20:39 (15)					
	16:19	17:18	18	16:44 (6)	18:16	20:17	32	19:18 (2)	21:15	24	20:23 (18)	22:02	31	21:10 (14)		
9	08:49	08:05	16:26 (1)	07:01	17:29 (5)	06:42	18:47 (2)	05:34	20:00 (18)	04:52	20:40 (15)					
	16:21	17:20	18	16:44 (6)	18:18	20:19	30	19:17 (2)	21:17	22	20:22 (18)	22:03	30	21:10 (14)		
10	08:49	08:03	16:26 (1)	06:58	17:31 (5)	06:40	18:48 (2)	05:32	20:01 (18)	04:51	20:39 (15)					
	16:22	17:23	16	16:42 (1)	18:20	20:21	27	19:15 (2)	21:18	22	20:23 (18)	22:04	31	21:10 (14)		
11	08:48	08:01	16:28 (1)	06:56	17:32 (5)	06:37	18:49 (2)	05:30	20:02 (18)	04:51	20:40 (15)					
	16:24	17:25	14	16:42 (1)	18:22	20:23	25	19:14 (2)	21:20	19	20:21 (18)	22:05	30	21:10 (14)		
12	08:47	07:59	16:29 (1)	06:53	17:33 (5)	06:35	18:50 (2)	05:28	20:02 (18)	04:50	20:40 (15)					
	16:26	17:27	12	16:41 (1)	18:24	20:25	22	19:12 (2)	21:22	18	20:20 (18)	22:06	30	21:10 (14)		
13	08:46	07:57	16:32 (1)	06:51	17:34 (5)	06:32	18:52 (2)	05:26	20:03 (18)	04:50	20:41 (15)					
	16:27	17:29	6	16:38 (1)	18:26	20:27	18	19:10 (2)	21:24	16	20:19 (18)	22:07	30	21:11 (14)		
14	08:45	07:55	16:33 (1)	06:48	17:35 (5)	06:30	18:56 (2)	05:24	20:06 (18)	04:49	20:40 (15)					
	16:29	17:31	18:28	20:29	11	19:07 (2)	21:26	12	20:18 (18)	22:07	30	21:10 (14)				
15	08:44	07:52	16:34 (1)	06:46	17:36 (5)	06:28	18:58 (2)	05:22	20:08 (18)	04:49	20:40 (15)					
	16:31	17:33	18:30	20:30	7	20:15 (18)	22:08	30	21:10 (14)							
16	08:43	07:50	16:35 (1)	06:43	17:37 (5)	06:25	18:59 (2)	05:21	20:09 (18)	04:49	20:41 (15)					
	16:32	17:35	18:32	20:32	21:29	22:08	30	21:11 (14)								
17	08:42	07:48	16:36 (1)	06:41	17:38 (5)	06:23	19:01 (2)	05:19	20:10 (18)	04:49	20:41 (15)					
	16:34	17:37	18:34	20:34	21:31	22:09	30	21:11 (14)								
18	08:41	07:46	16:37 (1)	06:38	17:39 (5)	06:20	19:02 (2)	05:17	20:11 (18)	04:49	20:41 (15)					
	16:36	17:39	18:36	20:36	21:33	22:09	30	21:11 (14)								
19	08:40	07:44	16:38 (1)	06:35	17:40 (5)	06:18	19:03 (2)	05:16	20:12 (18)	04:49	20:41 (15)					
	16:38	17:41	18:38	20:38	21:34	7	21:00 (14)	22:10	30	21:11 (14)						
20	08:39	07:41	16:39 (1)	06:33	17:41 (5)	06:15	19:04 (2)	05:14	20:13 (18)	04:49	20:41 (15)					
	16:40	17:43	18:40	20:40	21:36	11	21:02 (14)	22:10	30	21:11 (14)						
21	08:37	07:39	16:40 (1)	06:30	17:42 (5)	06:13	19:05 (2)	05:12	20:14 (18)	04:49	20:41 (15)					
	16:42	17:46	18:42	20:42	21:38	16	21:03 (14)	22:10	30	21:11 (14)						
22	08:36	07:37	16:41 (1)	06:28	17:43 (5)	06:11	19:06 (2)	05:11	20:15 (18)	04:49	20:42 (15)					
	16:44	17:48	18:44	20:44	21:39	19	21:04 (14)	22:11	30	21:12 (14)						
23	08:35	07:34	17:18 (5)	06:25	17:44 (5)	06:08	19:07 (2)	05:09	20:16 (18)	04:49	20:42 (15)					
	16:45	17:50	3	17:21 (5)	18:46	11	18:12 (2)	20:46	6	20:17 (17)	21:41	22	21:06 (14)	22:11	30	21:12 (14)
24	08:33	07:32	17:16 (5)	06:23	17:45 (5)	06:06	19:08 (2)	05:08	20:17 (17)	05:08	20:42 (15)	04:50	20:42 (15)			
	16:47	17:52	7	17:23 (5)	18:48	18	18:16 (2)	20:48	10	20:19 (17)	21:43	24	21:06 (14)	22:11	30	21:12 (14)
25	08:32	07:30	17:14 (5)	06:20	17:46 (5)	06:04	19:09 (2)	05:07	20:18 (18)	04:50	20:43 (15)					
	16:49	17:54	11	17:25 (5)	18:50	22	18:17 (2)	20:50	14	20:20 (17)	21:44	24	21:06 (14)	22:11	30	21:13 (14)
26	08:30	07:27	17:13 (5)	06:18	17:47 (5)	06:02	19:10 (2)	05:05	20:05 (18)	05:05	20:41 (15)	04:50	20:43 (15)			
	16:51	17:56	15	17:28 (5)	18:52	25	18:19 (2)	20:52	17	20:22 (17)	21:46	26	21:07 (14)	22:11	30	21:13 (14)
27	08:29	07:25	17:12 (5)	06:15	17:48 (5)	05:59	19:11 (2)	05:04	20:06 (18)	05:04	20:41 (15)	04:51	20:44 (15)			
	16:53	17:58	17	17:29 (5)	18:54	29	18:20 (2)	20:54	20	20:23 (17)	21:47	27	21:08 (14)	22:11	29	21:13 (14)
28	08:27	07:23	17:12 (5)	06:13	17:49 (5)	05:57	19:12 (2)	05:03	20:07 (18)	05:03	20:40 (15)	04:51	20:43 (15)			
	16:55	18:00	20	17:32 (5)	18:56	30	18:21 (2)	20:56	22	20:24 (17)	21:49	28	21:08 (14)	22:11	30	21:13 (14)
29	08:25	07:19	16:43 (1)	06:10	17:50 (5)	05:55	19:13 (2)	05:01	20:09 (18)	05:01	20:40 (15)	04:52	20:44 (15)			
	16:57	18:02	19:57	32	19:21 (2)	20:58	24	20:25 (17)	21:50	28	21:08 (14)	22:10	30	21:14 (14)		
30	08:24	07:15	16:44 (1)	07:07	17:51 (5)	05:53	19:14 (2)	05:00	20:10 (18)	05:00	20:40 (15)	04:53	20:43 (15)			
	17:00	18:05	19:59	33	19:22 (2)	21:00	24	20:25 (18)	21:52	29	21:09 (14)	22:10	31	21:14 (14)		
31	08:22	07:07	16:45 (1)	07:05	17:52 (5)	05:51	19:15 (2)	04:59	20:11 (18)	04:59	20:39 (15)					
	17:02	18:07	20:01	35	19:22 (2)	21:53	30	21:09 (14)								
Potential sun hours	244	270	366	422	499	517										
Total, worst case			241	354	546	609										904
Sun reduction			0,24	0,34	0,39	0,52										0,48
Oper. time red.			1,00	1,00	1,00	1,00										1,00
Wind dir. red.			0,84	0,97	0,99	0,92										0,87
Total reduction			0,21	0,33	0,39	0,47										0,42
Total, real			50	117	212	289										382

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December										
1	04:53	20:44 (15)	05:35	20:12 (18)	06:33	18:48 (2)	07:29	07:30	15:56 (1)	08:27						
	22:10	30	21:14 (14)	21:32	19	20:31 (18)	20:23	25	19:13 (2)	19:06	16:53	16	16:12 (1)	16:06		
2	04:54	20:44 (15)	05:37	20:12 (18)	06:34	18:47 (2)	07:30	07:32	15:55 (1)	08:29						
	22:09	31	21:15 (14)	21:30	20	20:32 (18)	20:20	27	19:14 (2)	19:04	16:51	17	16:12 (6)	16:05		
3	04:55	20:45 (15)	05:39	20:11 (18)	06:36	18:44 (2)	07:32	07:34	15:55 (1)	08:30						
	22:09	30	21:15 (14)	21:28	22	20:33 (18)	20:18	30	19:14 (2)	19:01	16:49	19	16:14 (6)	16:04		
4	04:56	20:44 (15)	05:41	20:10 (18)	06:38	18:43 (2)	07:34	07:36	15:55 (1)	08:32						
	22:08	31	21:15 (14)	21:26	23	20:33 (18)	20:15	32	19:15 (2)	18:59	16:47	19	16:14 (6)	16:04		
5	04:57	20:45 (15)	05:43	20:10 (18)	06:40	18:42 (2)	07:36	07:38	15:55 (1)	08:33						
	22:08	30	21:15 (14)	21:24	24	20:34 (18)	20:13	33	19:15 (2)	18:56	16:45	17	16:12 (6)	16:03		
6	04:58	20:45 (15)	05:44	20:09 (18)	06:42	18:42 (2)	07:38	07:40	15:55 (1)	08:35						
	22:07	31	21:16 (14)	21:22	25	20:34 (18)	20:10	34	19:16 (2)	18:54	5	17:55 (5)	07:40	15:55 (1)	08:35	
7	04:59	20:45 (15)	05:46	20:08 (18)	06:44	18:41 (2)	07:40	07:42	15:56 (1)	08:36						
	22:06	31	21:16 (14)	21:20	26	20:34 (18)	20:08	35	19:16 (2)	18:51	11	18:03 (5)	16:41	12	16:08 (6)	16:02
8	05:00	20:46 (15)	05:48	20:08 (18)	06:46	18:40 (2)	07:42	07:44	15:56 (1)	08:38						
	22:06	30	21:16 (14)	21:18	26	20:34 (18)	20:05	35	19:15 (2)	18:49	15	18:04 (5)	16:39	10	16:06 (6)	16:01
9	05:01	20:46 (15)	05:50	20:09 (18)	06:47	18:40 (2)	07:44	07:46	15:57 (1)	08:39						
	22:05	30	21:16 (14)	21:16	25	20:34 (18)	20:03	35	19:15 (2)	18:46	17	18:04 (5)	16:37	6	16:03 (6)	16:01
10	05:02	20:46 (15)	05:52	20:08 (18)	06:49	18:39 (2)	07:46	07:48	15:58 (1)	08:40						
	22:04	30	21:16 (14)	21:14	25	20:33 (18)	20:00	36	19:15 (2)	18:44	19	18:06 (5)	16:35	3	16:01 (1)	16:01
11	05:03	20:46 (15)	05:54	20:08 (18)	06:51	18:39 (2)	07:48	07:50	16:01 (1)	08:41						
	22:03	30	21:16 (14)	21:12	25	20:33 (18)	19:58	36	19:15 (2)	18:41	20	18:06 (5)	16:33	16:00		
12	05:04	20:48 (15)	05:55	20:09 (18)	06:53	18:40 (2)	07:50	07:52	16:00 (6)	08:42						
	22:02	29	21:17 (14)	21:10	24	20:33 (18)	19:55	34	19:14 (2)	18:39	20	18:06 (5)	16:32	16:00		
13	05:06	20:48 (15)	05:57	20:09 (18)	06:55	18:39 (2)	07:52	07:54	16:00 (6)	08:44						
	22:01	29	21:17 (14)	21:08	24	20:33 (18)	19:52	33	19:12 (2)	18:36	21	18:06 (5)	16:30	16:00		
14	05:07	20:48 (15)	05:59	20:09 (18)	06:57	18:39 (2)	07:54	07:56	16:00 (6)	08:45						
	22:00	29	21:17 (14)	21:05	23	20:32 (17)	19:50	33	19:12 (2)	18:34	19	18:04 (5)	16:28	16:00		
15	05:08	20:49 (15)	06:01	20:10 (18)	06:59	18:40 (2)	07:56	07:58	16:00 (6)	08:46						
	21:59	28	21:17 (14)	21:03	22	20:32 (17)	19:47	31	19:11 (2)	18:32	16	18:01 (5)	16:27	16:00		
16	05:10	20:50 (15)	06:03	20:11 (18)	07:00	18:41 (2)	07:57	08:00	16:00 (6)	08:47						
	21:57	27	21:17 (14)	21:01	20	20:31 (17)	19:45	28	19:09 (2)	18:29	13	17:59 (5)	16:25	16:00		
17	05:11	20:50 (15)	06:05	20:11 (18)	07:02	18:42 (2)	07:59	08:02	16:00 (6)	08:47						
	21:56	27	21:17 (14)	20:59	17	20:28 (17)	19:42	26	19:08 (2)	18:27	10	17:56 (5)	16:23	16:00		
18	05:13	20:51 (15)	06:06	20:13 (17)	07:04	18:42 (2)	08:01	08:04	16:00 (6)	08:48						
	21:55	25	21:16 (14)	20:56	13	20:26 (17)	19:40	23	19:05 (2)	18:24	6	17:54 (5)	16:22	16:00		
19	05:14	20:52 (15)	06:08	20:15 (17)	07:06	18:44 (2)	08:03	08:06	16:00 (6)	08:49						
	21:54	24	21:16 (14)	20:54	9	20:24 (17)	19:37	19	19:03 (2)	18:22	1	17:51 (5)	16:20	16:01		
20	05:16	20:53 (15)	06:10	20:17 (17)	07:08	18:47 (2)	08:05	08:08	16:00 (6)	08:50						
	21:52	23	21:16 (14)	20:52	5	20:22 (17)	19:35	13	19:00 (2)	18:20	16:19	16:01				
21	05:17	20:54 (15)	06:12	07:10	08:07	08:10	08:10	08:10	16:00 (6)	08:50						
	21:51	21	21:15 (14)	20:49	19:32	18:17	16:01									
22	05:19	20:56 (15)	06:14	07:12	08:09	08:11	08:11	08:11	16:00 (6)	08:51						
	21:49	18	21:14 (14)	20:47	19:29	18:15	16:02									
23	05:20	20:59 (15)	06:16	07:14	08:11	08:13	08:13	08:13	16:00 (6)	08:51						
	21:48	14	21:13 (14)	20:45	19:27	18:13	16:02									
24	05:22	21:02 (14)	06:18	07:15	08:13	08:15	08:15	08:15	16:00 (6)	08:52						
	21:46	10	21:12 (14)	20:42	19:24	18:10	16:03									
25	05:23	21:05 (14)	06:20	07:17	07:15	08:17	08:17	08:17	16:00 (6)	08:52						
	21:45	3	21:08 (14)	20:40	19:22	17:08	16:03									
26	05:25	06:21	07:19	07:19	07:17	08:19	08:19	08:19	16:00 (6)	08:52						
	21:43	20:37	19:19	17:06	16:11	16:04										
27	05:27	06:23	07:21	07:21	07:19	08:20	08:20	08:20	16:00 (6)	08:53						
	21:41	20:35	19:17	17:04	16:10	16:05										
28	05:28	06:25	07:23	07:23	07:21	08:22	08:22	08:22	16:00 (6)	08:53						
	21:39	20:33	19:14	17:02	16:09	16:06										
29	05:30	20:17 (18)	06:27	18:56 (2)	07:25	07:24	16:01 (1)	08:24	16:00 (6)	08:53						
	21:38	9	20:26 (18)	20:30	12	19:08 (2)	19:11	16:59	8	16:09 (1)	16:08	16:07				
30	05:32	20:15 (18)	06:29	18:52 (2)	07:27	07:26	15:58 (1)	08:26	16:00 (6)	08:53						
	21:36	14	20:29 (18)	20:28	18	19:10 (2)	19:09	16:57	12	16:10 (1)	16:07	16:08				
31	05:34	20:14 (18)	06:31	18:50 (2)	07:28	07:28	15:57 (1)	08:53	16:00 (6)	08:53						
	21:34	17	20:31 (18)	20:25	22	19:12 (2)	16:55	14	16:11 (1)	16:09	16:09					
Potential sun hours	519	464	383	327	254	227										
Total, worst case	681	469	598	227	133											
Sun reduction	0,49	0,52	0,40	0,31	0,16											
Oper. time red.	1,00	1,00	1,00	1,00	1,00											
Wind dir. red.	0,88	0,96	1,00	0,91	0,81											
Total reduction	0,43	0,50	0,39	0,28	0,13											
Total, real	291	232	236	63	17											

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: I - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, shadow times, and reduction factors. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: J - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sunrise and sunset times, and a summary section at the bottom for 'Potential sun hours' and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: K - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, minutes with flicker, and total reduction. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March		April	May	June	
1	08:53	08:20	07:20		07:03	05:51	04:58	
	16:10	17:04	18:02		20:03	21:02	21:54	
2	08:53	08:19	07:18		07:00	05:48	04:57	
	16:11	17:06	18:04		20:05	21:04	21:56	
3	08:52	08:17	07:16		06:58	05:46	04:56	
	16:13	17:08	18:06		20:07	21:05	21:57	
4	08:52	08:15	07:13		06:55	05:44	04:55	
	16:14	17:10	18:08		20:09	21:07	21:58	
5	08:52	08:13	07:11		06:52	05:42	04:55	
	16:15	17:12	18:10		20:11	21:09	21:59	
6	08:51	08:11	07:08		06:50	05:40	04:54	
	16:17	17:14	18:12		20:13	21:11	22:00	
7	08:51	08:09	07:06		06:47	05:38	04:53	
	16:18	17:16	18:14		20:15	21:13	22:01	
8	08:50	08:07	07:03		06:45	05:36	04:52	05:30 (18)
	16:19	17:18	18:16		20:17	21:15	22:02	1 05:31 (18)
9	08:50	08:05	07:01	07:25 (6)	06:42	05:34	04:52	05:27 (18)
	16:21	17:21	18:18	3 07:28 (6)	20:19	21:17	22:03	6 05:33 (18)
10	08:49	08:03	06:58	07:23 (6)	06:40	05:32	04:51	05:26 (18)
	16:23	17:23	18:20	5 07:28 (6)	20:21	21:19	22:04	9 05:35 (18)
11	08:48	08:01	06:56	07:20 (6)	06:37	05:30	04:51	05:25 (18)
	16:24	17:25	18:22	8 07:28 (6)	20:23	21:20	22:05	10 05:35 (18)
12	08:47	07:59	06:53	07:18 (6)	06:35	05:28	04:50	05:25 (18)
	16:26	17:27	18:24	9 07:27 (6)	20:25	21:22	22:06	12 05:37 (18)
13	08:46	07:57	06:51	07:17 (6)	06:33	05:26	04:50	05:25 (18)
	16:27	17:29	18:26	8 07:25 (6)	20:27	21:24	22:07	12 05:37 (18)
14	08:46	07:55	06:48	07:20 (6)	06:30	05:24	04:50	05:25 (18)
	16:29	17:31	18:28	3 07:23 (6)	20:29	21:26	22:07	13 05:38 (18)
15	08:45	07:53	06:46		06:28	05:23	04:49	05:24 (18)
	16:31	17:33	18:30		20:31	21:28	22:08	14 05:38 (18)
16	08:44	07:50	06:43		06:25	05:21	04:49	05:24 (18)
	16:33	17:35	18:32		20:33	21:29	22:09	15 05:39 (18)
17	08:42	07:48	06:41		06:23	05:19	04:49	05:24 (18)
	16:34	17:37	18:34		20:35	21:31	22:09	15 05:39 (18)
18	08:41	07:46	06:38		06:20	05:17	04:49	05:24 (18)
	16:36	17:39	18:36		20:36	21:33	22:10	15 05:39 (18)
19	08:40	07:44	06:36		06:18	05:16	04:49	05:24 (18)
	16:38	17:42	18:38		20:38	21:35	22:10	16 05:40 (18)
20	08:39	07:42	06:33		06:16	05:14	04:49	05:24 (18)
	16:40	17:44	18:40		20:40	21:36	22:10	16 05:40 (18)
21	08:38	07:39	06:31		06:13	05:13	04:49	05:25 (18)
	16:42	17:46	18:42		20:42	21:38	22:11	16 05:41 (18)
22	08:36	07:37	06:28		06:11	05:11	04:49	05:25 (18)
	16:44	17:48	18:44		20:44	21:40	22:11	16 05:41 (18)
23	08:35	07:35	06:25		06:09	05:10	04:50	05:25 (18)
	16:46	17:50	18:46		20:46	21:41	22:11	16 05:41 (18)
24	08:33	07:32	06:23		06:06	05:08	04:50	05:26 (18)
	16:48	17:52	18:48		20:48	21:43	22:11	16 05:42 (18)
25	08:32	07:30	06:20		06:04	05:07	04:50	05:26 (18)
	16:50	17:54	18:50		20:50	21:44	22:11	15 05:41 (18)
26	08:30	07:28	06:18		06:02	05:05	04:51	05:26 (18)
	16:52	17:56	18:52		20:52	21:46	22:11	15 05:41 (18)
27	08:29	07:25	06:15		05:59	05:04	04:51	05:27 (18)
	16:54	17:58	18:54		20:54	21:47	22:11	14 05:41 (18)
28	08:27	07:23	06:13		05:57	05:03	04:52	05:27 (18)
	16:56	18:00	18:56		20:56	21:49	22:11	14 05:41 (18)
29	08:26		07:10		05:55	05:02	04:52	05:28 (18)
	16:58		19:58		20:58	21:50	22:10	13 05:41 (18)
30	08:24		07:08		05:53	05:00	04:53	05:29 (18)
	17:00		20:00		21:00	21:52	22:10	12 05:41 (18)
31	08:22		07:05			04:59		
	17:02		20:01			21:53		
Potential sun hours	244	270	366		422	499	517	
Total, worst case			36				301	
Sun reduction			0,34				0,48	
Oper. time red.			1,00				1,00	
Wind dir. red.			0,99				0,77	
Total reduction			0,34				0,38	
Total, real			12				114	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:29 (18)	05:36	06:33	07:29	07:56 (6)	07:30	08:27
	22:10	05:40 (18)	21:32	20:23	19:07	10 08:06 (6)	16:53	16:06
2	04:54	05:30 (18)	05:37	06:35	07:31	07:58 (6)	07:32	08:29
	22:09	10 05:40 (18)	21:30	20:20	19:04	8 08:06 (6)	16:51	16:05
3	04:55	05:31 (18)	05:39	06:37	07:33	08:00 (6)	07:34	08:31
	22:09	8 05:39 (18)	21:29	20:18	19:01	6 08:06 (6)	16:49	16:05
4	04:56	05:33 (18)	05:41	06:38	07:34	08:02 (6)	07:36	08:32
	22:08	5 05:38 (18)	21:27	20:15	18:59	4 08:06 (6)	16:47	16:04
5	04:57		05:43	06:40	07:36	08:04 (6)	07:38	08:34
	22:08		21:25	20:13	18:56	1 08:05 (6)	16:45	16:03
6	04:58		05:45	06:42	07:38		07:40	08:35
	22:07		21:23	20:10	18:54		16:43	16:03
7	04:59		05:46	06:44	07:40		07:42	08:36
	22:06		21:21	20:08	18:51		16:41	16:02
8	05:00		05:48	06:46	07:42		07:44	08:38
	22:06		21:18	20:05	18:49		16:39	16:02
9	05:01		05:50	06:48	07:44		07:46	08:39
	22:05		21:16	20:03	18:46		16:37	16:01
10	05:02		05:52	06:50	07:46		07:48	08:40
	22:04		21:14	20:00	18:44		16:35	16:01
11	05:03		05:54	06:51	07:48		07:50	08:41
	22:03		21:12	19:58	18:42		16:34	16:01
12	05:05		05:56	06:53	07:50		07:52	08:43
	22:02		21:10	19:55	18:39		16:32	16:00
13	05:06		05:57	06:55	07:52		07:54	08:44
	22:01		21:08	19:53	18:37		16:30	16:00
14	05:07		05:59	06:57	07:54		07:56	08:45
	22:00		21:06	19:50	18:34		16:28	16:00
15	05:09		06:01	06:59	07:56		07:58	08:46
	21:59		21:03	19:48	18:32		16:27	16:00
16	05:10		06:03	07:01	07:58		08:00	08:47
	21:58		21:01	19:45	18:29		16:25	16:00
17	05:11		06:05	07:02	08:00		08:02	08:48
	21:56		20:59	19:42	18:27		16:24	16:00
18	05:13		06:07	07:04	08:02		08:04	08:48
	21:55		20:57	19:40	18:25		16:22	16:00
19	05:14		06:09	07:06	08:04		08:06	08:49
	21:54		20:54	19:37	18:22		16:20	16:01
20	05:16		06:10	07:08	08:06		08:08	08:50
	21:52		20:52	19:35	18:20		16:19	16:01
21	05:17		06:12	07:10	08:08		08:10	08:50
	21:51		20:50	19:32	18:18		16:18	16:01
22	05:19		06:14	07:12	08:10		08:12	08:51
	21:49		20:47	19:30	18:15		16:16	16:02
23	05:20		06:16	07:14	08:12		08:13	08:51
	21:48		20:45	19:27	18:13		16:15	16:02
24	05:22		06:18	07:16	08:14		08:15	08:52
	21:46		20:42	19:24	18:11		16:14	16:03
25	05:24		06:20	07:17	07:16		08:17	08:52
	21:45		20:40	19:22	17:08		16:12	16:04
26	05:25		06:22	07:19	07:18		08:19	08:52
	21:43		20:38	19:19	17:06		16:11	16:04
27	05:27		06:23	07:21	07:20		08:21	08:53
	21:41		20:35	19:17	17:04		16:10	16:05
28	05:29		06:25	07:23	07:22		08:22	08:53
	21:40		20:33	19:14	17:02		16:09	16:06
29	05:30		06:27	07:25	07:24		08:24	08:53
	21:38		20:30	19:12	17:00		16:08	16:07
30	05:32		06:29	07:27	07:26	07:57 (6)	08:26	08:53
	21:36		20:28	19:09	7 08:04 (6)	16:57	16:07	16:08
31	05:34		06:31		07:28			08:53
	21:34		20:25		16:55		16:09	16:09
Potential sun hours	519	464	383	327		254	227	
Total, worst case	34		7		29			
Sun reduction	0,49		0,40		0,31			
Oper. time red.	1,00		1,00		1,00			
Wind dir. red.	0,77		0,99		0,99			
Total reduction	0,38		0,40		0,31			
Total, real	13		3		9			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82Shadow receptor: M - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:51	04:58	04:54	05:36	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:55	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:24	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:02
9	08:49	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:01
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:55	06:53	07:50	07:52	08:42
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:33	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:50	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:33	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:34	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:13	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:18	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:39	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:15	08:17	08:52
	16:50	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:27	06:18	06:02	05:05	04:51	05:25	06:22	07:19	08:17	08:19	08:52
	16:52	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:20	08:53
	16:54	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	08:21	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:01	16:09	16:06
29	08:25		07:10	05:55	05:02	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

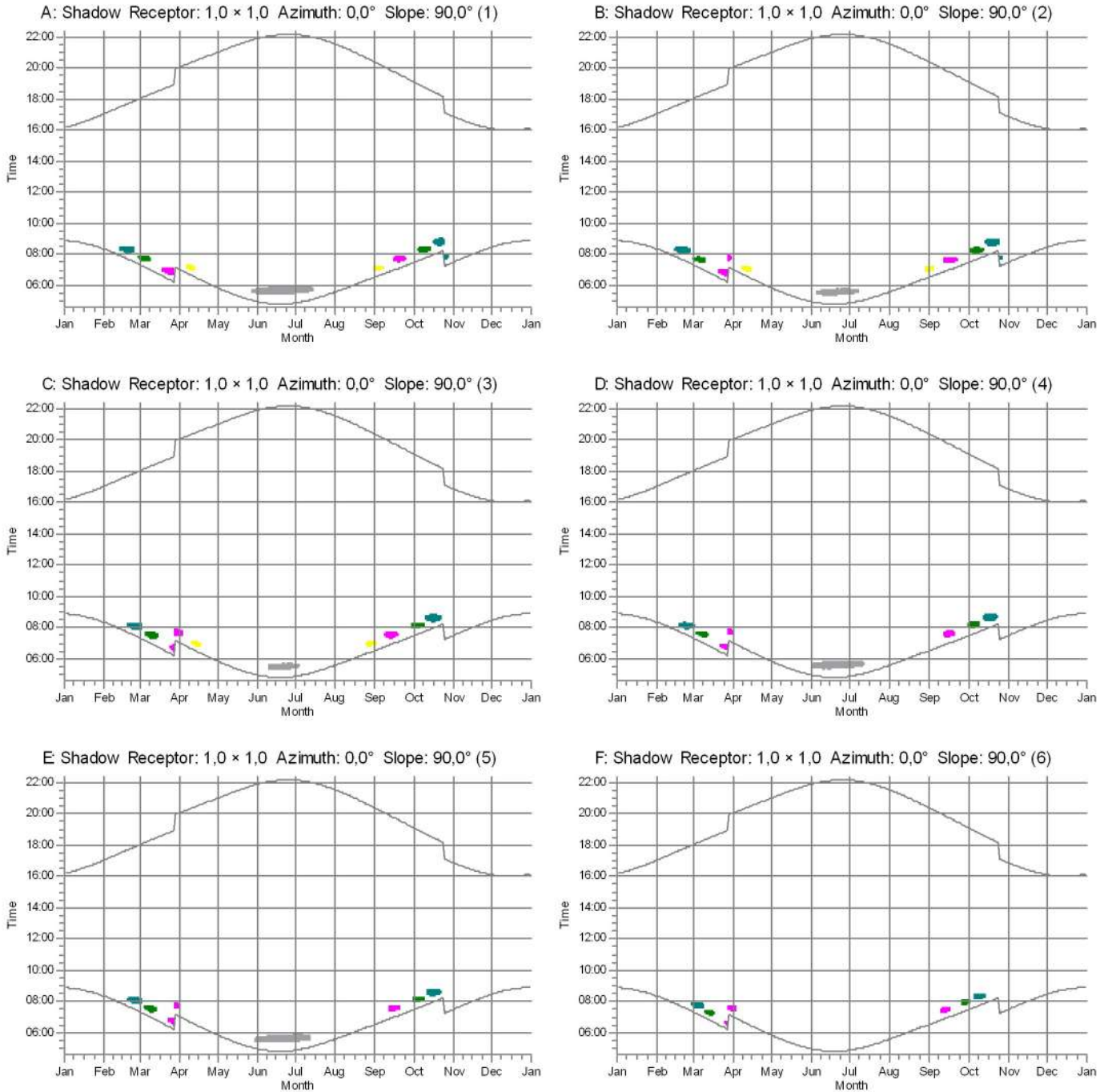
6 VE Jurbudpiø ir Bridpiø k., Āakiø raj.

Licensed user:

Infraplanas
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LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E82



WTGs

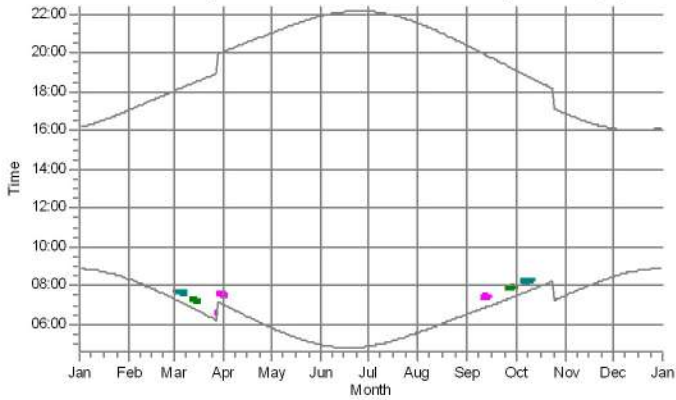
- 1: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (1)
- 2: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (2)
- 5: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)

- 6: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)
- 16: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (11)

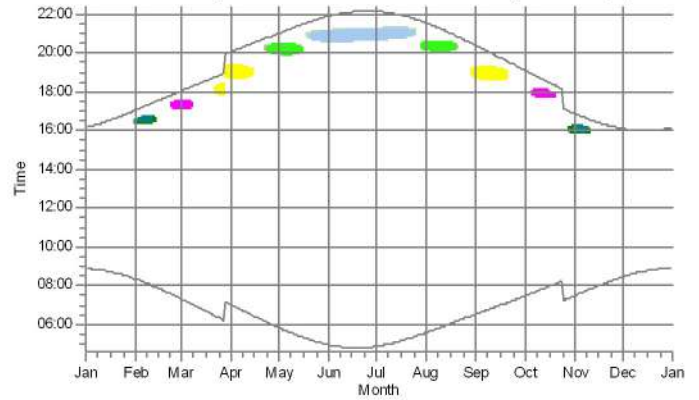
SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E82

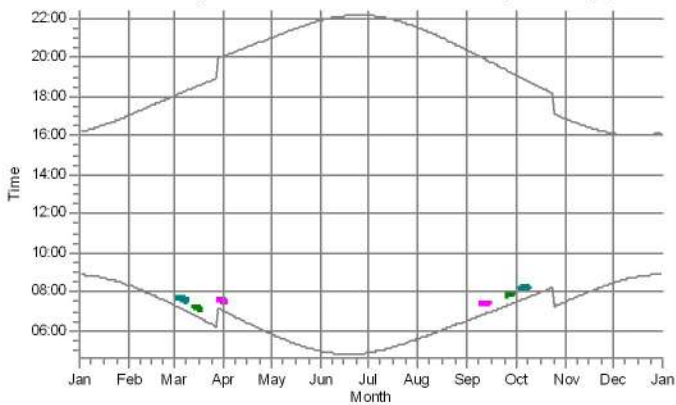
G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)



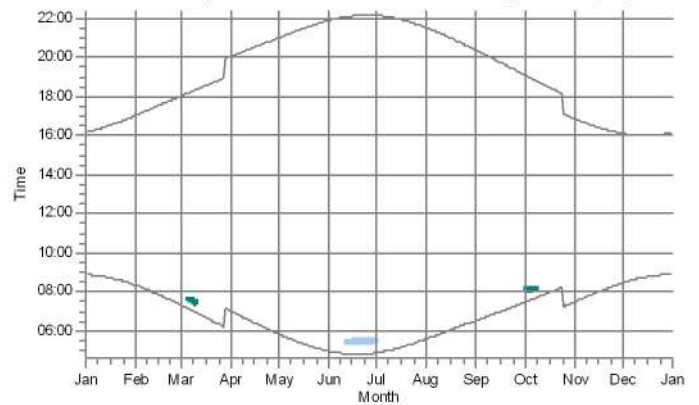
H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)



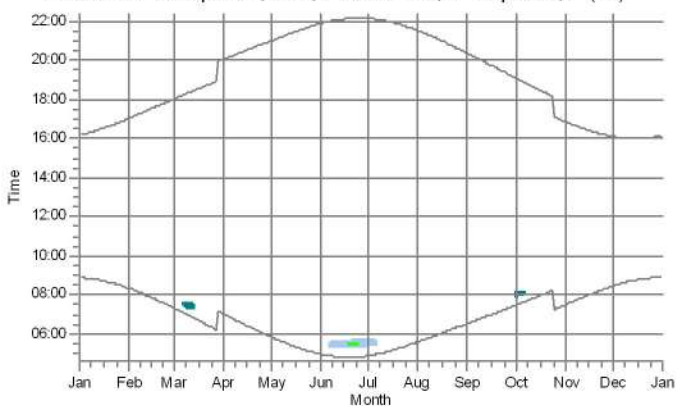
I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)



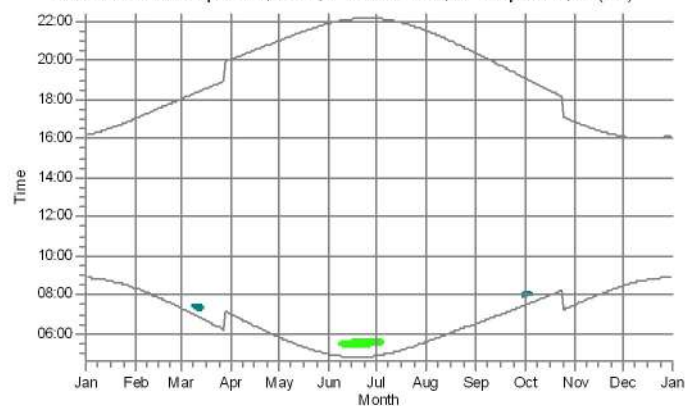
J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)



K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)



L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)



WTGs

- 1: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (1)
- 2: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (2)
- 5: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)

- 14: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (9)
- 15: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (10)
- 17: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (12)
- 18: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (13)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas

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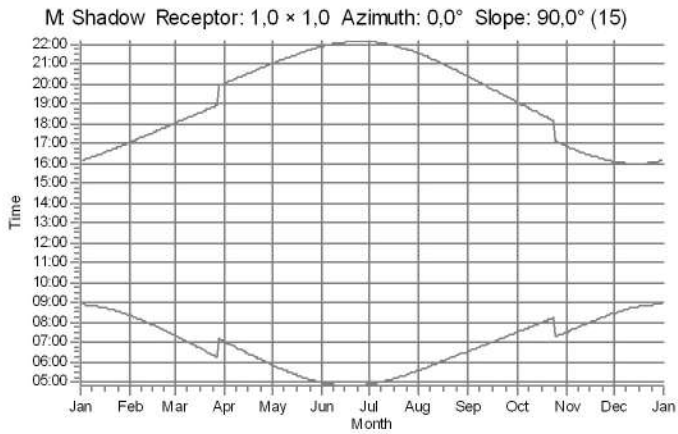
Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

2021.06.16 15:31/3.4.415

SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E82



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 1 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and 31 rows of daily data. Each cell contains a time range (e.g., 08:53 | 08:20 16:27-16:31/4) and a shadow status (0 or 1). Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 2 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for individual days, showing sun rise/set times and potential sun hours.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 3 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (7)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time

0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:22	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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K. Donelaicio str. 55-2
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+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 4 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (8)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time

0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:30	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	17:02	16:09	16:06
29	08:25		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	16:59	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 5 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a matrix of sun rise/set times and operational status (0/1) for each hour. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelacio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 6 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (10)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (e.g., 08:53 | 17:04) and a numerical value. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 7 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:07	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:42
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:47	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:00
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:11	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 8 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:11	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 9 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 10 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise, Sun set, First time with flicker, Last time with flicker). Summary rows at the bottom show Potential sun hours and Sum of minutes with flicker for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 11 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:29	06:25	07:23	08:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:11	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 12 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:03	05:51	04:58	04:53	05:36	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:07	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:19	20:05	18:49	16:39	16:02
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:47	07:57	06:51	06:33	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:35	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:42	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:31	06:13	05:13	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:18	16:18	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:30	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:16	08:14	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	07:16	08:17	08:52
	16:50	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:22	07:19	07:18	08:19	08:53
	16:52	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:54	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	07:22	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:02	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:11	21:38	20:30	19:12	17:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		20:00	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 13 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:03	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:13	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:22	07:19	08:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:29	06:25	07:23	08:22	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		20:00	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 14 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day (1-31), showing sun rise/set times and operational minutes with flicker.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 15 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 13 columns (January to December) and 31 rows (Day 1 to Day 31). Each cell contains a 2x2 matrix of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each row.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 16 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (11)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 13 columns (months) and 31 rows (days). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and minutes with flicker. Includes a summary row at the bottom for 'Potential sun hours' and 'Sum of minutes with flicker'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 17 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (TOT: 240,0 m) (12)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' at the bottom.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 15:31/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82WTG: 18 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (TOT: 240,0 m) (13)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 13 columns for months (January to December) and 31 rows of data. Each cell contains a time range (hh:mm) and a numerical value representing shadow minutes. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

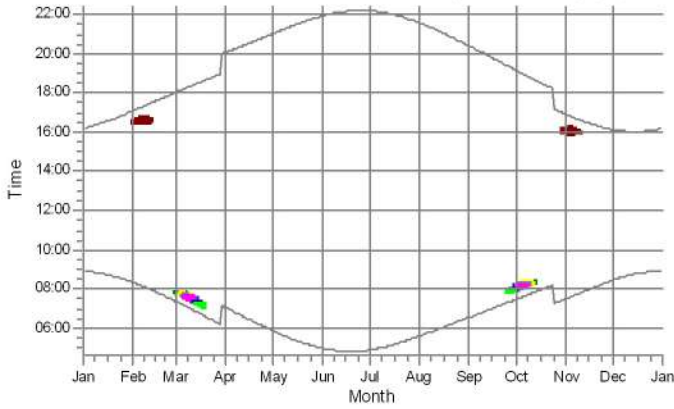
Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



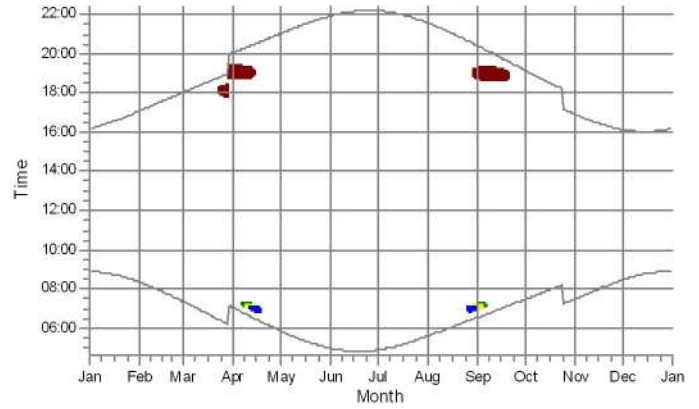
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E82

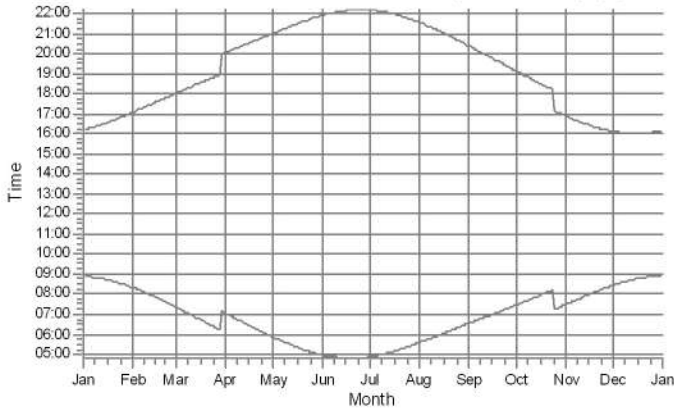
1: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (1)



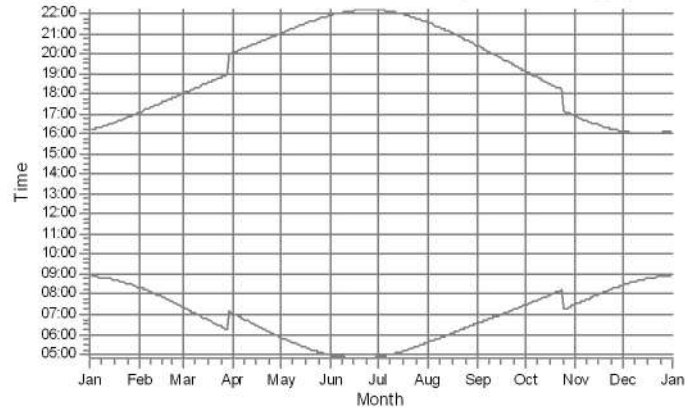
2: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (2)



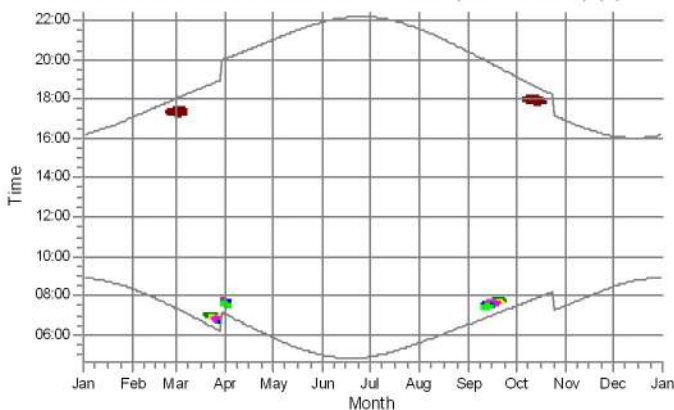
3: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)



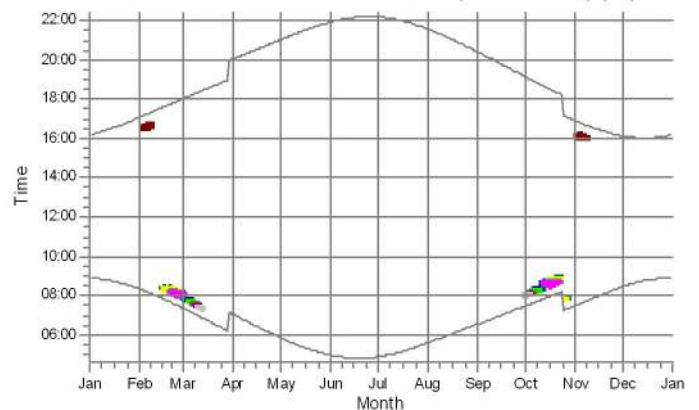
4: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)



5: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)



6: ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)

- G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

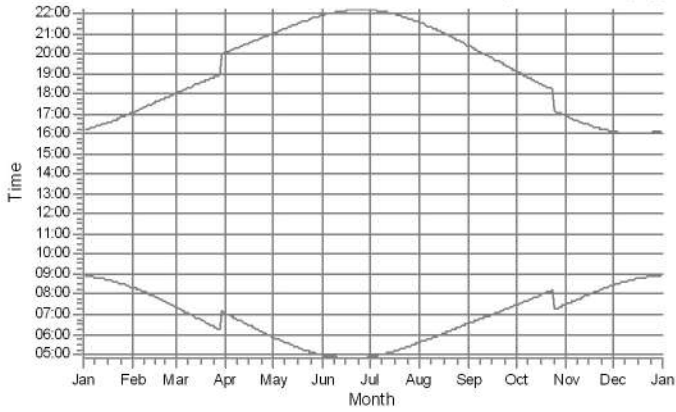
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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:31/3.4.415

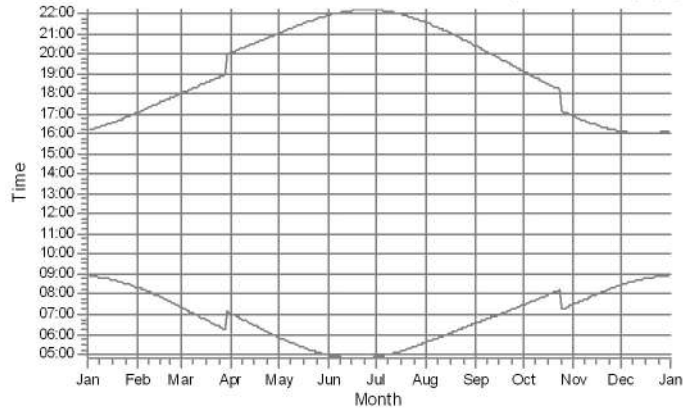
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E82

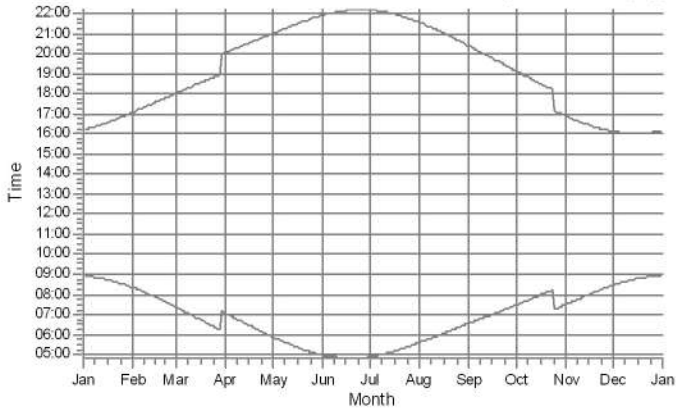
7: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)



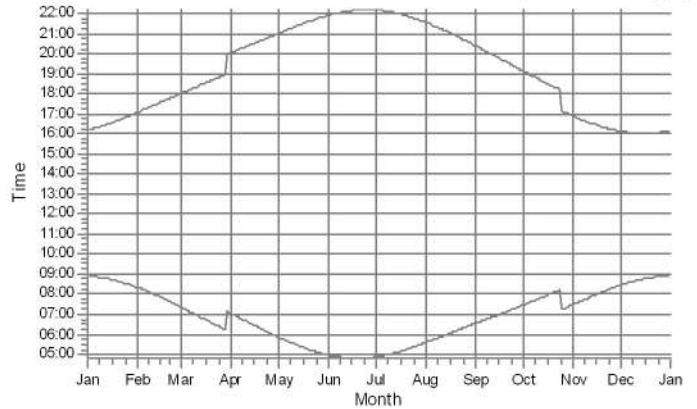
8: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)



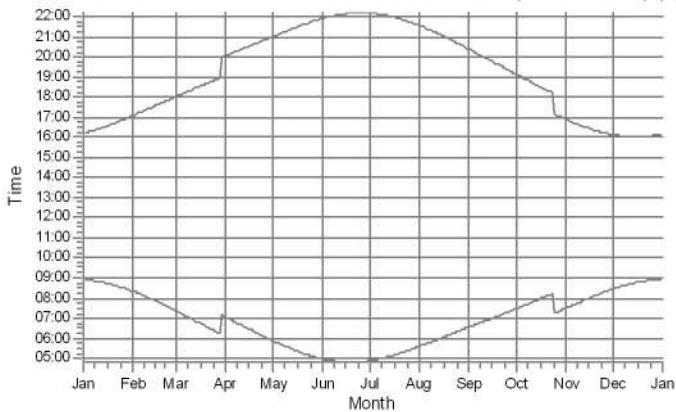
9: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)



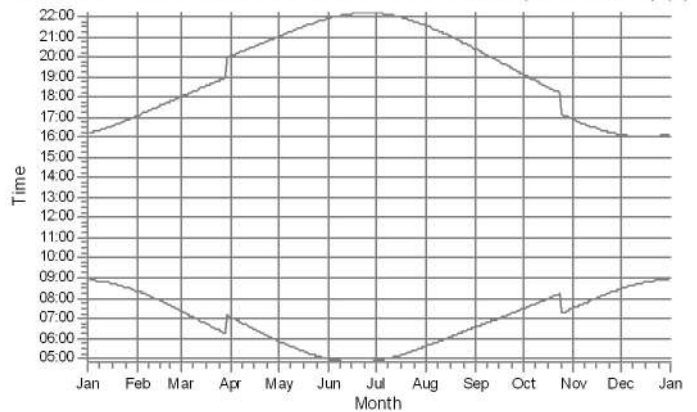
10: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)



11: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)



12: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)

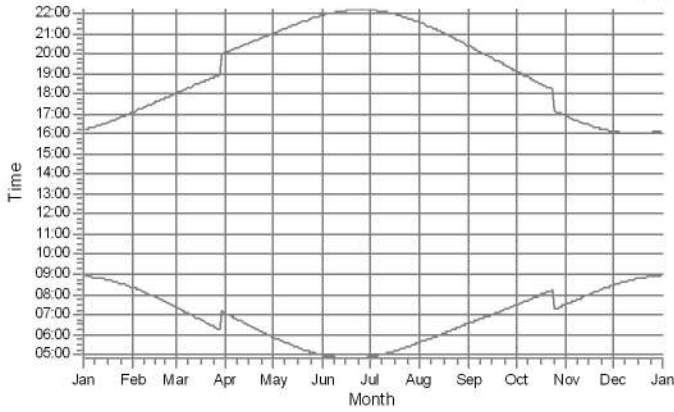


Shadow receptors

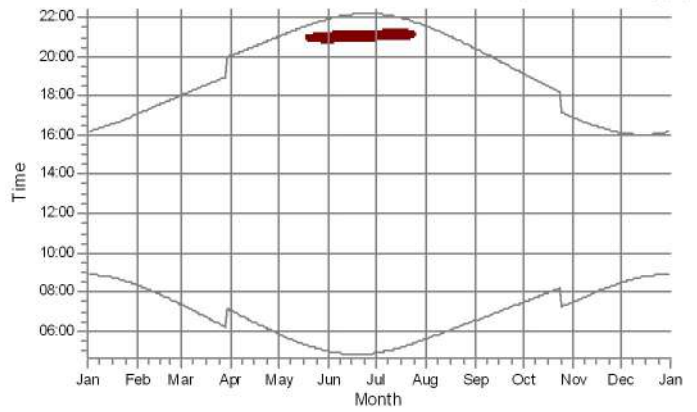
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E82

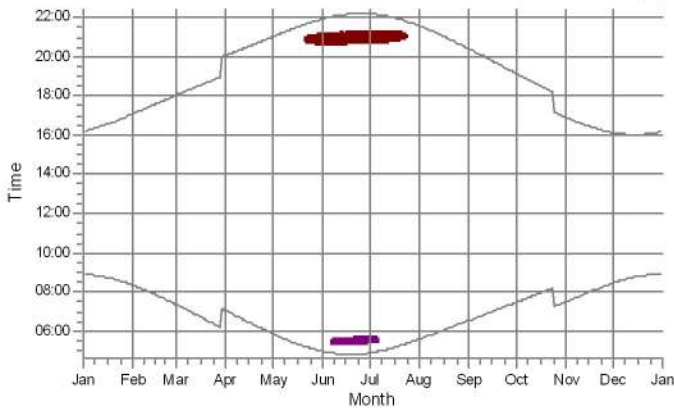
13: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (8)



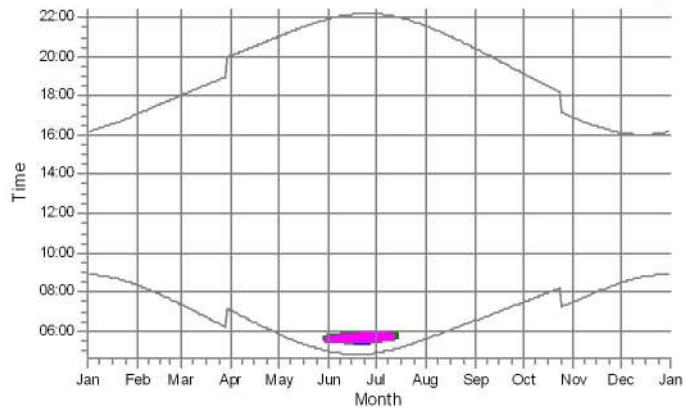
14: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (9)



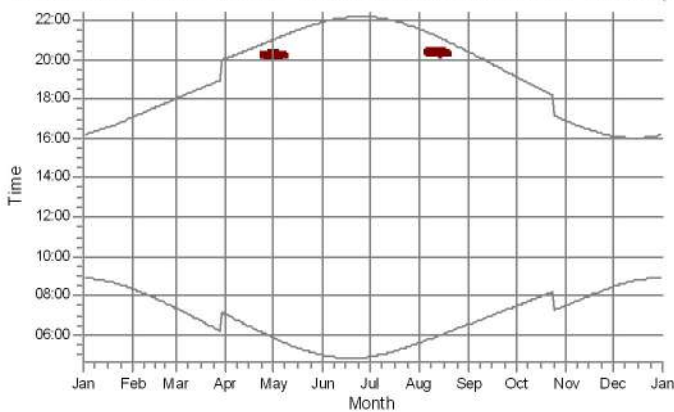
15: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (10)



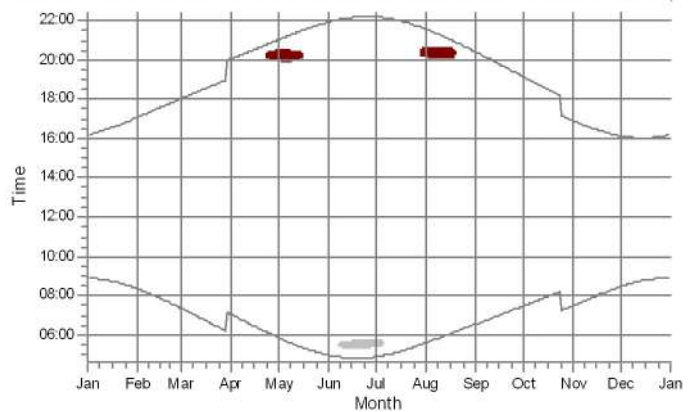
16: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (11)



17: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



18: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



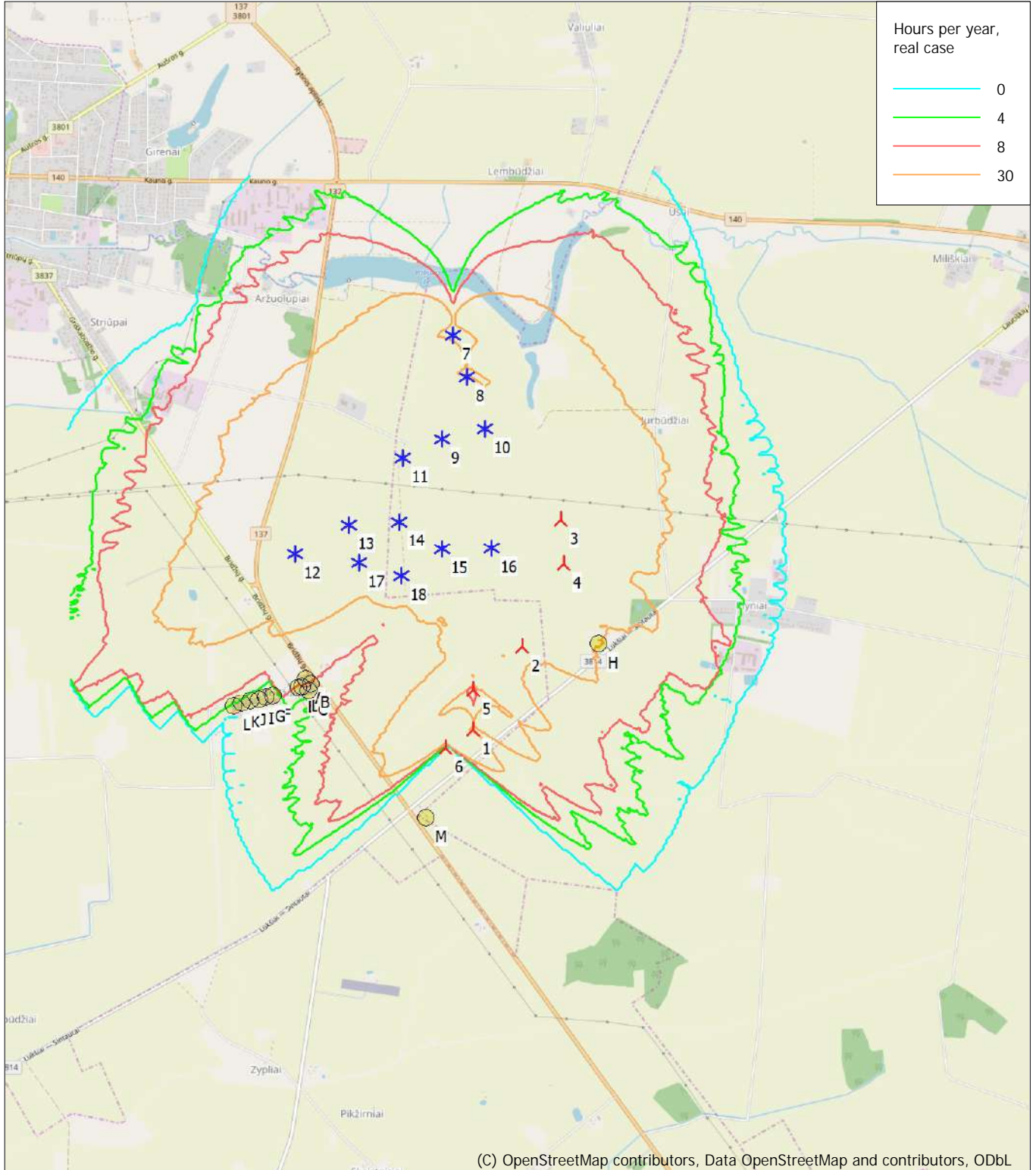
Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)

- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

SHADOW - Map

Calculation: Suminis poveikis Enercon E82



0 500 1000 1500 2000 m

Map: EMD OpenStreetMap , Print scale 1:40.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 442.440 North: 6.088.240

▲ New WTG * Existing WTG ● Shadow receptor

Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Main Result

Calculation: Suminis poveikis Enercon E82 Shut down
Assumptions for shadow calculations

Maximum distance for influence
Calculate only when more than 20 % of sun is covered by the blade
Please look in WTG table

Minimum sun height over horizon for influence 3 °
Day step for calculation 1 days
Time step for calculation 1 minutes

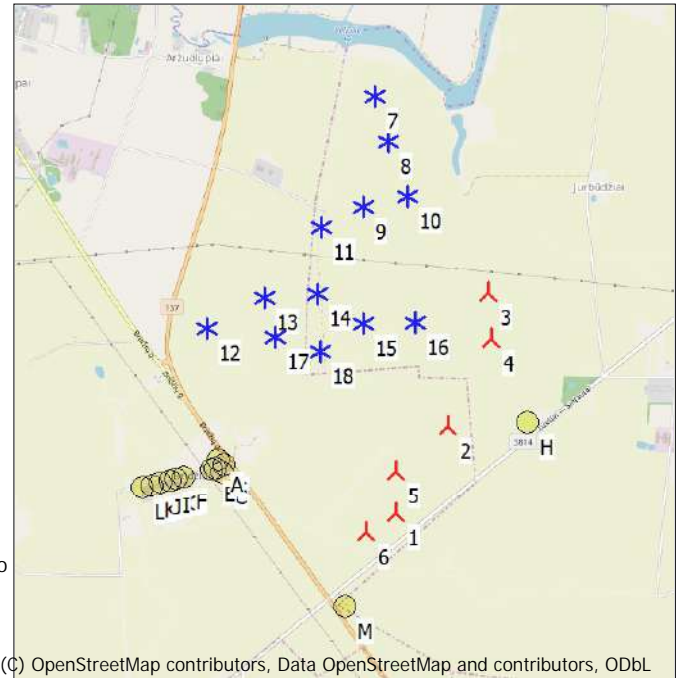
Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Flicker curtailment according to specified plan

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
Height contours used: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo
Obstacles used in calculation
Eye height for map: 1,5 m
Grid resolution: 1,0 m

All coordinates are in
Lithuanian TM LKS94-LKS94 (LT)



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL

Scale 1:50.000
New WTG Existing WTG Shadow receptor

WTGs

Y	X	Z	Row data/Description	WTG type		Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
				Valid	Manufact.					Calculation [m]	RPM [RPM]
			[m]								
1	442.261	6.087.347	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
2	442.609	6.087.922	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
3	442.891	6.088.803	50,3 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
4	442.908	6.088.497	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
5	442.265	6.087.626	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
6	442.058	6.087.221	50,0 ENERCON E-82 2000 ...No	Yes	ENERCON	E-82-2.000	2.000	82,0	78,3	1.552	19,5
7	442.152	6.090.108	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
8	442.241	6.089.811	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
9	442.064	6.089.378	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
10	442.365	6.089.446	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
11	441.791	6.089.249	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
12	441.022	6.088.592	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
13	441.405	6.088.791	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
14	441.755	6.088.807	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
15	442.055	6.088.609	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
16	442.405	6.088.612	50,0 NORDEX N149/4.0-4.... Yes	Yes	NORDEX	N149/4.0-4.5-4.500	4.500	149,0	165,0	1.805	10,7
17	441.469	6.088.526	50,0 GE WIND ENERGY 5.... Yes	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0
18	441.767	6.088.429	50,0 GE WIND ENERGY 5.... Yes	Yes	GE WIND ENERGY	5.3-158 Thrust 700-5.300	5.300	158,0	161,0	1.816	0,0

Shadow receptor-Input

No.	Y	X	Z	Width [m]	Height [m]	Elevation a.g.l. [m]	Slope of window [°]	Direction mode	Eye height (ZVI) a.g.l. [m]
A	441.089	6.087.718	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	441.126	6.087.681	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	441.105	6.087.633	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	441.066	6.087.665	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	441.036	6.087.656	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	440.853	6.087.605	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	440.806	6.087.594	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	443.142	6.087.939	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	440.759	6.087.581	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

To be continued on next page...

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Raminta Survilė / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Main Result

Calculation: Suminis poveikis Enercon E82 Shut down

...continued from previous page

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
J	440.698	6.087.567	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	440.639	6.087.551	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	440.580	6.087.537	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	441.914	6.086.736	50,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Calculation Results

Shadow receptor

Shadow, expected values

No.	Shadow hours per year [h/year]	Avoided hours per year [h/year]
A*	9:15	0:13
B*	6:51	0:15
C*	5:33	0:14
D	7:26	
E	7:46	
F	1:58	
G	1:44	
H*	28:47	2:40
I	1:34	
J	1:37	
K	2:44	
L	2:31	
M	0:00	

* Receptors where shadow flicker is reduced by curtailment

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]	Stopped due to flicker curtailment [h/year]	Expected [h/year]
1	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (1)	13:58		3:43
2	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (2)	16:14	8:16	6:23
3	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (7)	0:00		0:00
4	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (8)	0:00		0:00
5	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (9)	14:21		4:46
6	ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)	18:05		4:43
7	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)	0:00		0:00
8	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)	0:00		0:00
9	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)	0:00		0:00
10	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)	0:00		0:00
11	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)	0:00		0:00
12	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)	0:00		0:00
13	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)	0:00		0:00
14	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)	22:38		9:40
15	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)	32:58		13:47
16	NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (11)	17:16		6:40
17	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)	8:59		4:11
18	GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)	20:12		9:03

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53	08:20	07:20	07:46 (1)	07:03	05:51
	16:10	17:04	18:02	5 07:51 (1)	20:03	21:02
2	08:53	08:19	07:18	07:43 (1)	07:00	05:48
	16:11	17:06	18:04	8 07:51 (1)	20:05	21:03
3	08:52	08:17	07:16	07:41 (1)	06:57	05:46
	16:13	17:08	18:06	10 07:51 (1)	20:07	21:05
4	08:52	08:15	07:13	07:38 (1)	06:55	05:44
	16:14	17:10	18:08	13 07:51 (1)	20:09	21:07
5	08:52	08:13	07:11	07:36 (1)	06:52	05:42
	16:15	17:12	18:10	15 07:51 (1)	20:11	21:09
6	08:51	08:11	07:08	07:36 (1)	06:50	05:40
	16:17	17:14	18:12	14 07:50 (1)	20:13	21:11
7	08:51	08:09	07:06	07:36 (1)	06:47	05:38
	16:18	17:16	18:14	12 07:48 (1)	20:15	21:13
8	08:50	08:07	07:03	07:39 (1)	06:45	05:36
	16:19	17:18	18:16	7 07:46 (1)	20:17	21:15
9	08:50	08:05	07:01		06:42	05:34
	16:21	17:21	18:18		20:19	21:17
10	08:49	08:03	06:58		06:40	05:32
	16:22	17:23	18:20		20:21	21:19
11	08:48	08:01	06:56		06:37	05:30
	16:24	17:25	18:22		20:23	21:20
12	08:47	07:59	06:53		06:35	05:28
	16:26	17:27	18:24		20:25	21:22
13	08:46	07:57	06:51		06:33	05:26
	16:27	17:29	18:26		20:27	21:24
14	08:46	07:55	08:22 (6)	06:48	06:30	05:24
	16:29	17:31	3 08:25 (6)	18:28	20:29	21:26
15	08:45	07:53	08:19 (6)	06:46	06:28	05:23
	16:31	17:33	7 08:26 (6)	18:30	20:31	21:28
16	08:44	07:50	08:17 (6)	06:43	06:25	05:21
	16:33	17:35	10 08:27 (6)	18:32	20:33	21:29
17	08:42	07:48	08:15 (6)	06:41	06:23	05:19
	16:34	17:37	13 08:28 (6)	18:34	20:34	21:31
18	08:41	07:46	08:12 (6)	06:38	06:20	05:17
	16:36	17:39	15 08:27 (6)	18:36	20:36	21:33
19	08:40	07:44	08:10 (6)	06:36	07:00 (5)	06:18
	16:38	17:42	17 08:27 (6)	18:38	2 07:02 (5)	20:38
20	08:39	07:41	08:10 (6)	06:33	06:57 (5)	06:16
	16:40	17:44	18 08:28 (6)	18:40	6 07:03 (5)	20:40
21	08:38	07:39	08:10 (6)	06:31	06:55 (5)	06:13
	16:42	17:46	16 08:26 (6)	18:42	9 07:04 (5)	20:42
22	08:36	07:37	08:11 (6)	06:28	06:52 (5)	06:11
	16:44	17:48	15 08:26 (6)	18:44	11 07:03 (5)	20:44
23	08:35	07:35	08:12 (6)	06:25	06:50 (5)	06:09
	16:46	17:50	12 08:24 (6)	18:46	14 07:04 (5)	20:46
24	08:33	07:32	08:14 (6)	06:23	06:47 (5)	06:06
	16:48	17:52	8 08:22 (6)	18:48	16 07:03 (5)	20:48
25	08:32	07:30		06:20	06:47 (5)	06:04
	16:50	17:54		18:50	14 07:01 (5)	20:50
26	08:30	07:28		06:18	06:48 (5)	06:02
	16:52	17:56		18:52	13 07:01 (5)	20:52
27	08:29	07:25		06:15	06:49 (5)	05:59
	16:54	17:58		18:54	9 06:58 (5)	20:54
28	08:27	07:23	07:48 (1)	06:13		05:57
	16:56	18:00	1 07:49 (1)	18:56		20:56
29	08:26			07:10	05:55	05:02
	16:58			19:58	20:58	21:50
30	08:24			07:08	05:53	05:00
	17:00			20:00	21:52	8 05:42 (16)
31	08:22			07:05	04:59	05:33 (16)
	17:02			20:01	21:53	11 05:44 (16)
Potential sun hours	244	270	366	422	499	517
Total, worst case			135	178	23	620
Sun reduction			0,24	0,34	0,52	0,48
Oper. time red.			1,00	1,00	1,00	1,00
Wind dir. red.			0,91	0,98	0,80	0,80
Total reduction			0,23	0,34	0,42	0,39
Total, real			30	61	10	245

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: A - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December				
1	04:54	05:33 (16)	05:36	06:33	07:02 (2)	07:29	07:30	08:27		
	22:10	05:55 (16)	21:32	20:23	07:11 (2)	19:07	16:53	16:06		
2	04:54	05:34 (16)	05:37	06:35	07:03 (2)	07:31	07:32	08:29		
	22:09	05:55 (16)	21:30	20:20	07:12 (2)	19:04	16:51	16:05		
3	04:55	05:35 (16)	05:39	06:36	07:05 (2)	07:32	07:34	08:30		
	22:09	05:55 (16)	21:29	20:18	07:12 (2)	19:01	16:49	16:05		
4	04:56	05:35 (16)	05:41	06:38	07:06 (2)	07:34	07:36	08:32		
	22:08	05:55 (16)	21:27	20:15	07:12 (2)	18:59	16:47	16:04		
5	04:57	05:36 (16)	05:43	06:40	07:08 (2)	07:36	08:17 (1)	07:38	08:34	
	22:08	05:55 (16)	21:25	20:13	07:11 (2)	18:56	4	08:21 (1)	16:45	16:03
6	04:58	05:35 (16)	05:45	06:42	07:10 (2)	07:38	08:14 (1)	07:40	08:35	
	22:07	05:54 (16)	21:23	20:10	07:11 (2)	18:54	10	08:24 (1)	16:43	16:03
7	04:59	05:36 (16)	05:46	06:44	07:10	07:40	08:12 (1)	07:42	08:36	
	22:06	05:54 (16)	21:21	20:08	07:11	18:51	13	08:25 (1)	16:41	16:02
8	05:00	05:37 (16)	05:48	06:46	07:11	07:42	08:11 (1)	07:44	08:38	
	22:06	05:54 (16)	21:18	20:05	07:12	18:49	15	08:26 (1)	16:39	16:02
9	05:01	05:37 (16)	05:50	06:48	07:12	07:44	08:12 (1)	07:46	08:39	
	22:05	05:54 (16)	21:16	20:03	07:13	18:46	14	08:26 (1)	16:37	16:01
10	05:02	05:38 (16)	05:52	06:49	07:13	07:46	08:14 (1)	07:48	08:40	
	22:04	05:53 (16)	21:14	20:00	07:14	18:44	12	08:26 (1)	16:35	16:01
11	05:03	05:40 (16)	05:54	06:51	07:14	07:48	08:16 (1)	07:50	08:41	
	22:03	05:54 (16)	21:12	19:58	07:15	18:41	9	08:25 (1)	16:34	16:01
12	05:05	05:41 (16)	05:55	06:53	07:15	07:50	08:18 (1)	07:52	08:43	
	22:02	05:53 (16)	21:10	19:55	07:16	18:39	7	08:25 (1)	16:32	16:00
13	05:06	05:42 (16)	05:57	06:55	07:16	07:52	08:20 (1)	07:54	08:44	
	22:01	05:51 (16)	21:08	19:53	07:17	18:37	3	08:23 (1)	16:30	16:00
14	05:07	05:43 (16)	05:59	06:57	07:17	07:54	07:56	08:45		
	22:00	05:50 (16)	21:06	19:50	07:18	18:34	16:28	16:00		
15	05:08	06:01	06:59	07:56	07:58	08:46				
	21:59	21:03	19:47	18:32	16:27	16:00				
16	05:10	06:03	07:01	07:58	08:00	08:47				
	21:58	21:01	19:45	8	07:47 (5)	18:29	16:25	16:00		
17	05:11	06:05	07:02	07:37 (5)	08:00	08:47				
	21:56	20:59	19:42	12	07:49 (5)	18:27	3	08:51 (6)	16:23	16:00
18	05:13	06:07	07:04	07:36 (5)	08:02	08:44 (6)	08:04	08:48		
	21:55	20:57	19:40	14	07:50 (5)	18:25	10	08:54 (6)	16:22	16:00
19	05:14	06:08	07:06	07:34 (5)	08:04	08:42 (6)	08:06	08:49		
	21:54	20:54	19:37	15	07:49 (5)	18:22	14	08:56 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:41 (6)	08:08	08:50		
	21:52	20:52	19:35	14	07:49 (5)	18:20	16	08:57 (6)	16:19	16:01
21	05:17	06:12	07:10	07:37 (5)	08:08	08:40 (6)	08:10	08:50		
	21:51	20:50	19:32	12	07:49 (5)	18:18	17	08:57 (6)	16:18	16:01
22	05:19	06:14	07:12	07:39 (5)	08:10	08:40 (6)	08:12	08:51		
	21:49	20:47	19:30	9	07:48 (5)	18:15	18	08:58 (6)	16:16	16:02
23	05:20	06:16	07:14	07:41 (5)	08:12	08:41 (6)	08:13	08:51		
	21:48	20:45	19:27	7	07:48 (5)	18:13	17	08:58 (6)	16:15	16:02
24	05:22	06:18	07:16	07:43 (5)	08:14	08:43 (6)	08:15	08:52		
	21:46	20:42	19:24	3	07:46 (5)	18:11	14	08:57 (6)	16:14	16:03
25	05:24	06:20	07:17	07:16	07:16	07:45 (6)	08:17	08:52		
	21:45	20:40	19:22	17:08	12	07:57 (6)	16:12	16:04		
26	05:25	06:22	07:19	07:18	07:18	07:47 (6)	08:19	08:52		
	21:43	20:38	19:19	17:06	9	07:56 (6)	16:11	16:04		
27	05:27	06:23	07:21	07:20	07:20	07:49 (6)	08:21	08:53		
	21:41	20:35	19:17	17:04	6	07:55 (6)	16:10	16:05		
28	05:29	06:25	07:23	07:22	07:22	07:52 (6)	08:22	08:53		
	21:40	20:33	19:14	17:02	2	07:54 (6)	16:09	16:06		
29	05:30	06:27	07:25	07:24	07:24	08:24	08:24	08:53		
	21:38	20:30	19:12	17:00	16:08	16:07				
30	05:32	06:29	07:27	07:26	08:26	08:53				
	21:36	20:28	19:09	16:57	16:07	16:08				
31	05:34	06:31	07:05 (2)	07:28	08:53					
	21:34	20:25	3	07:08 (2)	16:55	16:09				
Potential sun hours	519	464	383	327	254	227				
Total, worst case	230	3	129	225						
Sun reduction	0,49	0,52	0,40	0,31						
Oper. time red.	1,00	1,00	1,00	1,00						
Wind dir. red.	0,80	0,98	1,00	0,93						
Total reduction	0,40	0,52	0,40	0,29						
Total, real	91	2	52	65						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June			
1	08:53	08:20	07:20	07:03	05:51	04:58			
	16:10	17:04	18:02	20:03	21:02	21:54			
2	08:53	08:19	07:18	07:43 (1)	07:00	05:48	04:57		
	16:11	17:06	18:04	07:46 (1)	20:05	21:03	21:56		
3	08:52	08:17	07:16	07:41 (1)	06:57	05:46	04:56		
	16:13	17:08	18:06	07:47 (1)	20:07	21:05	21:57		
4	08:52	08:15	07:13	07:38 (1)	06:55	05:44	04:55		
	16:14	17:10	18:08	07:47 (1)	20:09	21:07	21:58		
5	08:52	08:13	07:11	07:36 (1)	06:52	05:42	04:55		
	16:15	17:12	18:10	07:48 (1)	20:11	21:09	21:59		
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40	04:54	05:29 (16)	
	16:17	17:14	18:12	07:47 (1)	20:13	21:11	22:00	05:36 (16)	
7	08:51	08:09	07:06	07:31 (1)	06:47	05:38	04:53	05:28 (16)	
	16:18	17:16	18:14	07:46 (1)	20:15	21:13	22:01	05:37 (16)	
8	08:50	08:07	07:03	07:32 (1)	06:45	05:36	04:52	05:27 (16)	
	16:19	17:18	18:16	07:46 (1)	20:17	21:15	22:02	05:38 (16)	
9	08:50	08:05	07:01	07:32 (1)	06:42	05:34	04:52	05:27 (16)	
	16:21	17:21	18:18	07:44 (1)	20:19	21:17	22:03	05:39 (16)	
10	08:49	08:03	06:58	07:34 (1)	06:40	05:32	04:51	05:27 (16)	
	16:22	17:23	18:20	07:42 (1)	20:21	21:19	22:04	05:40 (16)	
11	08:48	08:01	06:56	06:37	05:30	04:51	05:26 (16)		
	16:24	17:25	18:22	20:23	21:20	22:05	14 05:40 (16)		
12	08:47	07:59	06:53	06:35	05:28	04:50	05:26 (16)		
	16:26	17:27	18:24	20:25	21:22	22:06	15 05:41 (16)		
13	08:46	07:57	06:51	06:33	05:26	04:50	05:26 (16)		
	16:27	17:29	18:26	20:27	21:24	22:07	16 05:42 (16)		
14	08:46	07:55	06:48	06:30	05:24	04:50	05:25 (16)		
	16:29	17:31	18:28	20:29	21:26	22:07	16 05:41 (16)		
15	08:45	07:53	08:19 (6)	06:46	06:28	05:23	04:49	05:25 (16)	
	16:31	17:33	2 08:21 (6)	18:30	20:31	21:28	22:08	17 05:42 (16)	
16	08:44	07:50	08:17 (6)	06:43	06:25	05:21	04:49	05:26 (16)	
	16:33	17:35	6 08:23 (6)	18:32	20:33	21:29	22:09	16 05:42 (16)	
17	08:42	07:48	08:15 (6)	06:41	06:23	05:19	04:49	05:26 (16)	
	16:34	17:37	9 08:24 (6)	18:34	20:34	21:31	22:09	17 05:43 (16)	
18	08:41	07:46	08:12 (6)	06:38	06:20	05:17	04:49	05:26 (16)	
	16:36	17:39	12 08:24 (6)	18:36	20:36	21:33	22:10	17 05:43 (16)	
19	08:40	07:44	08:10 (6)	06:36	06:18	05:16	04:49	05:26 (16)	
	16:38	17:42	15 08:25 (6)	18:38	20:38	21:35	22:10	17 05:43 (16)	
20	08:39	07:41	08:08 (6)	06:33	06:16	05:14	04:49	05:26 (16)	
	16:40	17:44	18 08:26 (6)	18:40	20:40	21:36	22:10	17 05:43 (16)	
21	08:38	07:39	08:06 (6)	06:31	06:13	05:13	04:49	05:27 (16)	
	16:42	17:46	19 08:25 (6)	18:42	20:42	21:38	22:11	18 05:45 (16)	
22	08:36	07:37	08:07 (6)	06:28	06:11	05:11	04:49	05:27 (16)	
	16:44	17:48	18 08:25 (6)	18:44	4 06:56 (5)	20:44	21:40	22:11	17 05:44 (16)
23	08:35	07:35	08:07 (6)	06:25	06:50 (5)	06:09	05:10	04:49	05:27 (16)
	16:46	17:50	17 08:24 (6)	18:46	8 06:58 (5)	20:46	21:41	22:11	17 05:44 (16)
24	08:33	07:32	08:08 (6)	06:23	06:47 (5)	06:06	05:08	04:50	05:27 (16)
	16:48	17:52	15 08:23 (6)	18:48	11 06:58 (5)	20:48	21:43	22:11	17 05:44 (16)
25	08:32	07:30	08:08 (6)	06:20	06:44 (5)	06:04	05:07	04:50	05:28 (16)
	16:50	17:54	13 08:21 (6)	18:50	13 06:57 (5)	20:50	21:44	22:11	17 05:45 (16)
26	08:30	07:28	08:11 (6)	06:18	06:42 (5)	06:02	05:05	04:51	05:28 (16)
	16:52	17:56	8 08:19 (6)	18:52	15 06:57 (5)	20:52	21:46	22:11	17 05:45 (16)
27	08:29	07:25	06:15	06:40 (5)	05:59	05:04	04:51	05:28 (16)	
	16:54	17:58	18:54	16 06:56 (5)	20:54	21:47	22:11	17 05:45 (16)	
28	08:27	07:23	06:13	06:41 (5)	05:57	05:03	04:52	05:28 (16)	
	16:56	18:00	18:56	15 06:56 (5)	20:56	21:49	22:11	17 05:45 (16)	
29	08:26		07:10	07:41 (5)	05:55	05:02	04:52	05:29 (16)	
	16:58		19:58	13 07:54 (5)	20:58	21:50	22:10	16 05:45 (16)	
30	08:24		07:08	07:43 (5)	05:53	05:00	04:53	05:30 (16)	
	17:00		20:00	9 07:52 (5)	21:00	21:52	22:10	15 05:45 (16)	
31	08:22		07:05			04:59			
	17:02		20:01			21:53			
Potential sun hours	244	270	366	422	499	517			
Total, worst case			152	197					382
Sun reduction			0,24	0,34					0,48
Oper. time red.			1,00	1,00					1,00
Wind dir. red.			0,91	0,99					0,78
Total reduction			0,23	0,34					0,39
Total, real			35	67					147

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: B - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	July	August	September	October	November	December				
1	04:54	05:30 (16)	05:36	06:33	07:01 (2)	07:29	07:30	08:27		
	22:10	05:44 (16)	21:32	20:23	07:08 (2)	19:07	16:53	16:06		
2	04:54	05:31 (16)	05:37	06:35	07:03 (2)	07:31	07:32	08:29		
	22:09	05:44 (16)	21:30	20:20	07:08 (2)	19:04	16:51	16:05		
3	04:55	05:32 (16)	05:39	06:36	07:05 (2)	07:32	08:13 (1)	07:34	08:30	
	22:09	05:44 (16)	21:29	20:18	07:07 (2)	19:01	08:19 (1)	16:49	16:05	
4	04:56	05:33 (16)	05:41	06:38	07:34	07:34	08:11 (1)	07:36	08:32	
	22:08	05:44 (16)	21:27	20:15	18:59	10	08:21 (1)	16:47	16:04	
5	04:57	05:34 (16)	05:43	06:40	07:36	08:09 (1)	07:38	08:33		
	22:08	05:44 (16)	21:25	20:13	18:56	13	08:22 (1)	16:45	16:03	
6	04:58	05:34 (16)	05:45	06:42	07:38	08:08 (1)	07:40	08:35		
	22:07	05:42 (16)	21:23	20:10	18:54	15	08:23 (1)	16:43	16:03	
7	04:59	05:36 (16)	05:46	06:44	07:40	08:08 (1)	07:42	08:36		
	22:06	05:40 (16)	21:21	20:08	18:51	15	08:23 (1)	16:41	16:02	
8	05:00	05:48	05:48	06:46	07:42	08:10 (1)	07:44	08:38		
	22:06	21:18	20:05	20:05	18:49	13	08:23 (1)	16:39	16:02	
9	05:01	05:50	06:48	07:44	08:12 (1)	07:46	08:39			
	22:05	21:16	20:03	18:46	11	08:23 (1)	16:37	16:01		
10	05:02	05:52	06:49	07:46	08:14 (1)	07:48	08:40			
	22:04	21:14	20:00	18:44	8	08:22 (1)	16:35	16:01		
11	05:03	05:54	06:51	07:48	08:16 (1)	07:50	08:41			
	22:03	21:12	19:58	18:41	5	08:21 (1)	16:34	16:01		
12	05:05	05:55	06:53	07:50	08:18 (1)	07:52	08:43			
	22:02	21:10	19:55	18:39	1	08:19 (1)	16:32	16:00		
13	05:06	05:57	06:55	07:52	07:52	07:54	08:44			
	22:01	21:08	19:53	8	07:43 (5)	18:37	16:30	16:00		
14	05:07	05:59	06:57	07:52 (5)	07:54	07:56	08:45			
	22:00	21:06	19:50	12	07:44 (5)	18:34	16:28	16:00		
15	05:08	06:01	06:59	07:51 (5)	07:56	08:46 (6)	07:58	08:46		
	21:59	21:03	19:47	14	07:45 (5)	18:32	3	08:49 (6)	16:27	16:00
16	05:10	06:03	07:01	07:30 (5)	07:58	08:42 (6)	08:00	08:47		
	21:58	21:01	19:45	16	07:46 (5)	18:29	10	08:52 (6)	16:25	16:00
17	05:11	06:05	07:02	07:30 (5)	08:00	08:40 (6)	08:02	08:47		
	21:56	20:59	19:42	16	07:46 (5)	18:27	14	08:54 (6)	16:23	16:00
18	05:13	06:07	07:04	07:32 (5)	08:02	08:39 (6)	08:04	08:48		
	21:55	20:57	19:40	14	07:46 (5)	18:25	16	08:55 (6)	16:22	16:00
19	05:14	06:08	07:06	07:33 (5)	08:04	08:38 (6)	08:06	08:49		
	21:54	20:54	19:37	11	07:44 (5)	18:22	17	08:55 (6)	16:20	16:01
20	05:16	06:10	07:08	07:35 (5)	08:06	08:37 (6)	08:08	08:50		
	21:52	20:52	19:35	8	07:43 (5)	18:20	18	08:55 (6)	16:19	16:01
21	05:17	06:12	07:10	07:37 (5)	08:08	08:37 (6)	08:10	08:50		
	21:51	20:50	19:32	5	07:42 (5)	18:18	18	08:55 (6)	16:18	16:01
22	05:19	06:14	07:12	07:39 (5)	08:10	08:39 (6)	08:12	08:51		
	21:49	20:47	19:30	1	07:40 (5)	18:15	17	08:56 (6)	16:16	16:02
23	05:20	06:16	07:14	08:12	08:41 (6)	08:13	08:51			
	21:48	20:45	19:27	18:13	14	08:55 (6)	16:15	16:02		
24	05:22	06:18	07:16	08:14	08:43 (6)	08:15	08:52			
	21:46	20:42	19:24	18:11	11	08:54 (6)	16:14	16:03		
25	05:24	06:20	07:17	07:16	07:45 (6)	08:17	08:52			
	21:45	20:40	19:22	17:08	8	07:53 (6)	16:12	16:04		
26	05:25	06:22	07:19	07:18	07:47 (6)	08:19	08:52			
	21:43	20:38	19:19	17:06	5	07:52 (6)	16:11	16:04		
27	05:27	06:23	07:21	07:20	07:49 (6)	08:21	08:53			
	21:41	20:35	19:17	17:04	1	07:50 (6)	16:10	16:05		
28	05:29	06:25	07:23	07:22	08:22	08:22	08:53			
	21:40	20:33	19:14	17:02	16:09	16:06				
29	05:30	06:27	06:59 (2)	07:25	07:24	08:24	08:53			
	21:38	20:30	8	07:07 (2)	19:12	17:00	16:08	16:07		
30	05:32	06:29	06:58 (2)	07:27	07:26	08:26	08:53			
	21:36	20:28	10	07:08 (2)	19:09	16:57	16:07	16:08		
31	05:34	06:31	06:59 (2)	07:28	07:28	08:53				
	21:34	20:25	9	07:08 (2)	16:55	16:09	16:09			
Potential sun hours	519	464	383	327	254	227				
Total, worst case	72	27	119	249						
Sun reduction	0,49	0,52	0,40	0,31						
Oper. time red.	1,00	1,00	1,00	1,00						
Wind dir. red.	0,78	0,98	1,00	0,94						
Total reduction	0,39	0,51	0,40	0,29						
Total, real	28	14	48	73						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	07:59 (6) 08:12 (6)	07:03 20:03	07:33 (5) 21:02
2	08:53 16:11	08:19 17:06	07:18 18:04	08:00 (6) 08:09 (6)	07:00 20:05	07:33 (5) 21:03
3	08:52 16:13	08:17 17:08	07:16 18:06	06:57 20:07	07:36 (5) 07:41 (5)	05:46 21:05
4	08:52 16:14	08:15 17:10	07:13 18:08	06:55 20:09	05:44 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	06:52 20:11	05:42 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:33 (1) 07:37 (1)	06:50 20:13	05:40 21:11
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 07:37 (1)	06:47 20:15	05:38 21:13
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 07:38 (1)	06:45 20:17	05:36 21:15
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 07:38 (1)	06:42 20:19	05:34 21:17
10	08:49 16:22	08:03 17:23	06:58 18:20	07:23 (1) 07:38 (1)	06:40 20:21	05:32 21:19
11	08:48 16:24	08:01 17:25	06:56 18:22	07:22 (1) 07:37 (1)	06:37 20:23	05:30 21:20
12	08:47 16:26	07:59 17:27	06:53 18:24	07:23 (1) 07:36 (1)	06:35 20:25	05:28 21:22
13	08:46 16:27	07:57 17:29	06:51 18:26	07:24 (1) 07:34 (1)	06:33 20:27	05:26 21:24
14	08:46 16:29	07:55 17:31	06:48 18:28	07:27 (1) 07:31 (1)	06:30 20:29	05:24 21:26
15	08:45 16:31	07:53 17:33	06:46 18:30	06:28 20:31	05:23 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	06:43 18:32	06:25 20:33	05:21 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	06:41 18:34	06:23 20:34	05:19 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	06:38 18:36	06:20 20:36	05:17 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	06:36 18:38	06:18 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	06:33 08:08 (6) 08:13 (6)	06:16 18:40	05:14 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	06:31 08:05 (6) 08:13 (6)	06:13 18:42	05:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	06:28 08:03 (6) 08:14 (6)	06:11 18:44	05:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	06:25 08:00 (6) 08:14 (6)	06:09 18:46	05:10 21:41	04:49 22:11
24	08:33 16:48	07:32 17:52	06:23 07:58 (6) 08:15 (6)	06:06 18:48	05:08 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	06:20 07:56 (6) 08:14 (6)	06:04 20:50	05:07 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	06:18 07:56 (6) 08:14 (6)	06:02 20:52	05:05 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 07:57 (6) 08:14 (6)	05:59 20:54	05:04 21:47	04:51 22:11
28	08:27 16:56	07:23 18:00	06:13 07:57 (6) 08:13 (6)	05:57 20:56	05:03 21:49	04:52 22:11
29	08:26 16:58	07:21 18:02	06:11 07:10 19:58	05:55 20:58	05:02 21:50	04:52 22:10
30	08:24 17:00	07:19 18:04	06:09 07:08 20:00	05:53 21:00	05:00 21:52	04:53 22:10
31	08:22 17:02	07:17 18:06	06:07 07:05 20:01	05:51 07:32 (5) 07:47 (5)	04:59 21:53	04:53 22:10
Potential sun hours	244	270	366	422	499	517
Total, worst case		124	187	29		239
Sun reduction		0,24	0,34	0,39		0,48
Oper. time red.		1,00	1,00	1,00		1,00
Wind dir. red.		0,93	0,98	1,00		0,77
Total reduction		0,23	0,34	0,40		0,38
Total, real		29	64	12		91

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: C - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	July	August	September	October	November	December
1	04:54	05:29 (16)	05:36	06:33	07:29	08:02 (1)
	22:10	05:37 (16)	21:32	20:23	19:07	08:15 (1)
2	04:54	05:31 (16)	05:37	06:35	07:31	08:01 (1)
	22:09	05:37 (16)	21:30	20:20	19:04	08:15 (1)
3	04:55	05:33 (16)	05:39	06:36	07:32	08:00 (1)
	22:09	05:35 (16)	21:29	20:18	19:01	08:16 (1)
4	04:56		05:41	06:38	07:34	08:02 (1)
	22:08		21:27	20:15	18:59	08:16 (1)
5	04:57		05:43	06:40	07:36	08:04 (1)
	22:08		21:25	20:13	18:56	08:15 (1)
6	04:58		05:45	06:42	07:38	08:06 (1)
	22:07		21:23	20:10	18:54	08:15 (1)
7	04:59		05:46	06:44	07:40	08:08 (1)
	22:06		21:21	20:08	18:51	08:14 (1)
8	05:00		05:48	06:46	07:42	08:10 (1)
	22:06		21:18	20:05	18:49	08:12 (1)
9	05:01		05:50	06:48	07:44	08:12 (1)
	22:05		21:16	20:03	07:34 (5)	18:46
10	05:02		05:52	06:49	07:46	08:12 (1)
	22:04		21:14	20:00	07:37 (5)	18:44
11	05:03		05:54	06:51	07:48	08:36 (6)
	22:03		21:12	19:58	07:38 (5)	18:41
12	05:05		05:55	06:53	07:50	08:33 (6)
	22:02		21:10	19:55	07:39 (5)	18:39
13	05:06		05:57	06:55	07:52	08:31 (6)
	22:01		21:08	19:53	07:39 (5)	18:37
14	05:07		05:59	06:57	07:54	08:30 (6)
	22:00		21:06	19:50	07:38 (5)	18:34
15	05:09		06:01	06:59	07:56	08:29 (6)
	21:59		21:03	19:47	07:38 (5)	18:32
16	05:10		06:03	07:01	07:58	08:28 (6)
	21:58		21:01	19:45	07:37 (5)	18:29
17	05:11		06:05	07:02	08:00	08:28 (6)
	21:56		20:59	19:42	07:36 (5)	18:27
18	05:13		06:07	07:04	08:02	08:30 (6)
	21:55		20:57	19:40	07:35 (5)	18:25
19	05:14		06:08	07:06	08:04	08:32 (6)
	21:54		20:54	19:37	18:22	13
20	05:16		06:10	07:08	08:06	08:34 (6)
	21:52		20:52	19:35	18:20	10
21	05:17		06:12	07:10	08:08	08:36 (6)
	21:51		20:50	19:32	18:18	7
22	05:19		06:14	07:12	08:10	08:39 (6)
	21:49		20:47	19:30	18:15	3
23	05:20		06:16	07:14	08:12	08:42 (6)
	21:48		20:45	19:27	18:13	
24	05:22		06:18	07:16	08:14	08:15
	21:46		20:42	19:24	18:11	
25	05:24		06:20	07:17	08:16	08:17
	21:45		20:40	19:22	17:08	
26	05:25		06:22	07:19	08:19	08:19
	21:43		20:38	19:19	17:06	
27	05:27		06:23	07:21	08:21	08:21
	21:41		20:35	19:17	17:04	
28	05:29		06:25	07:23	08:22	08:22
	21:40		20:33	19:14	17:02	
29	05:30		06:27	07:25	08:24	08:24
	21:38		20:30	19:12	17:00	
30	05:32		06:29	07:27	08:26	08:26
	21:36		20:28	19:09	16:57	
31	05:34		06:31	07:29	08:28	08:28
	21:34		20:25	19:07	16:55	
Potential sun hours	519	464	383	327	254	227
Total, worst case	16	38	111	234		
Sun reduction	0,49	0,52	0,40	0,31		
Oper. time red.	1,00	1,00	1,00	1,00		
Wind dir. red.	0,77	0,97	1,00	0,95		
Total reduction	0,38	0,51	0,40	0,30		
Total, real	6	19	45	69		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: D - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53 16:10	08:20 17:04	07:20 18:02	08:06 (6) 20:03	05:51 21:02	04:58 21:54
2	08:53 16:11	08:19 17:06	07:18 18:04	08:08 (6) 20:05	05:48 21:03	04:57 21:56
3	08:52 16:13	08:17 17:08	07:16 18:06	07:00 20:07	05:46 21:05	04:56 21:57
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (1) 20:09	05:44 21:07	04:55 21:58
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (1) 20:11	05:42 21:09	04:55 21:59
6	08:51 16:17	08:11 17:14	07:08 18:12	07:41 (1) 20:13	05:40 21:11	04:54 22:00
7	08:51 16:18	08:09 17:16	07:06 18:14	07:30 (1) 20:15	05:38 21:13	04:53 22:01
8	08:50 16:19	08:07 17:18	07:03 18:16	07:28 (1) 20:17	05:36 21:15	04:52 22:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:25 (1) 20:19	05:34 21:17	04:52 22:03
10	08:49 16:22	08:03 17:23	06:58 18:20	07:26 (1) 20:21	05:32 21:19	04:51 22:04
11	08:48 16:24	08:01 17:25	06:56 18:22	07:39 (1) 20:23	05:30 21:20	04:51 22:05
12	08:47 16:26	07:59 17:27	06:53 18:24	07:37 (1) 20:25	05:28 21:22	04:50 22:06
13	08:46 16:27	07:57 17:29	06:51 18:26	07:30 (1) 20:27	05:26 21:24	04:50 22:07
14	08:46 16:29	07:55 17:31	06:48 18:28	07:28 (1) 20:29	05:24 21:26	04:50 22:07
15	08:45 16:31	07:53 17:33	06:46 18:30	07:35 (1) 20:31	05:23 21:28	04:49 22:08
16	08:44 16:33	07:50 17:35	06:43 18:32	07:37 (1) 20:33	05:21 21:29	04:49 22:09
17	08:42 16:34	07:48 17:37	06:41 18:34	07:30 (1) 20:34	05:19 21:31	04:49 22:09
18	08:41 16:36	07:46 17:39	06:38 18:36	07:37 (1) 20:36	05:17 21:33	04:49 22:10
19	08:40 16:38	07:44 17:42	06:36 18:38	07:39 (1) 20:38	05:16 21:35	04:49 22:10
20	08:39 16:40	07:41 17:44	06:33 18:40	08:10 (6) 20:40	05:14 21:36	04:49 22:10
21	08:38 16:42	07:39 17:46	06:31 18:42	08:15 (6) 20:42	05:13 21:38	04:49 22:11
22	08:36 16:44	07:37 17:48	06:28 18:44	08:08 (6) 20:44	05:11 21:40	04:49 22:11
23	08:35 16:46	07:35 17:50	06:25 18:46	08:16 (6) 20:46	05:10 21:42	04:49 22:11
24	08:33 16:48	07:32 17:52	06:23 18:48	08:05 (6) 20:48	05:08 21:43	04:50 22:11
25	08:32 16:50	07:30 17:54	06:20 18:50	08:16 (6) 20:50	05:07 21:44	04:50 22:11
26	08:30 16:52	07:28 17:56	06:18 18:52	07:59 (6) 20:52	05:05 21:46	04:51 22:11
27	08:29 16:54	07:25 17:58	06:15 18:54	08:17 (6) 20:54	05:04 21:47	04:51 22:11
28	08:27 16:56	07:23 18:00	06:13 18:56	08:00 (6) 20:56	05:03 21:49	04:52 22:11
29	08:26 16:58	07:21 18:02	06:10 18:58	08:12 (6) 20:58	05:02 21:50	04:52 22:10
30	08:24 17:00	07:19 18:04	06:08 19:00	07:37 (5) 21:00	05:00 21:52	04:53 22:10
31	08:22 17:02	07:17 18:06	06:05 19:02	07:39 (5) 21:02	04:59 21:53	05:31 (16) 05:49 (16)
Potential sun hours	244	270	366	422	499	517
Total, worst case		125	175			509
Sun reduction		0,24	0,34			0,48
Oper. time red.		1,00	1,00			1,00
Wind dir. red.		0,93	0,99			0,79
Total reduction		0,23	0,34			0,39
Total, real		29	60			199

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: D - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December			
1	04:54	05:31 (16)	05:36	06:33	07:29	07:30	08:27		
	22:10	05:49 (16)	21:32	20:23	19:07	16:53	16:06		
2	04:54	05:31 (16)	05:37	06:35	07:31	08:07 (1)	07:32	08:29	
	22:09	05:49 (16)	21:30	20:20	19:04	9 08:16 (1)	16:51	16:05	
3	04:55	05:32 (16)	05:39	06:36	07:32	08:05 (1)	07:34	08:30	
	22:09	05:49 (16)	21:29	20:18	19:01	12 08:17 (1)	16:49	16:05	
4	04:56	05:33 (16)	05:41	06:38	07:34	08:04 (1)	07:36	08:32	
	22:08	05:49 (16)	21:27	20:15	18:59	14 08:18 (1)	16:47	16:04	
5	04:57	05:33 (16)	05:43	06:40	07:36	08:04 (1)	07:38	08:33	
	22:08	05:49 (16)	21:25	20:13	18:56	14 08:18 (1)	16:45	16:03	
6	04:58	05:33 (16)	05:45	06:42	07:38	08:06 (1)	07:40	08:35	
	22:07	05:48 (16)	21:23	20:10	18:54	12 08:18 (1)	16:43	16:03	
7	04:59	05:34 (16)	05:46	06:44	07:40	08:08 (1)	07:42	08:36	
	22:06	05:48 (16)	21:21	20:08	18:51	9 08:17 (1)	16:41	16:02	
8	05:00	05:35 (16)	05:48	06:46	07:42	08:10 (1)	07:44	08:38	
	22:06	05:47 (16)	21:18	20:05	18:49	7 08:17 (1)	16:39	16:02	
9	05:01	05:36 (16)	05:50	06:48	07:44	08:12 (1)	07:46	08:39	
	22:05	05:46 (16)	21:16	20:03	18:46	4 08:16 (1)	16:37	16:01	
10	05:02	05:37 (16)	05:52	06:49	07:46		07:48	08:40	
	22:04	8 05:45 (16)	21:14	20:00	18:44		16:35	16:01	
11	05:03	05:40 (16)	05:54	06:51	07:48		07:50	08:41	
	22:03	4 05:44 (16)	21:12	19:58	18:41		16:34	16:01	
12	05:05		05:55	06:53	07:50		07:52	08:43	
	22:02		21:10	19:55	6 07:39 (5)		16:32	16:00	
13	05:06		05:57	06:55	07:52		08:37 (6)	07:54	08:44
	22:01		21:08	19:53	11 07:41 (5)		7 08:44 (6)	16:30	16:00
14	05:07		05:59	06:57	07:54		08:34 (6)	07:56	08:45
	22:00		21:06	19:50	13 07:41 (5)		12 08:46 (6)	16:28	16:00
15	05:09		06:01	06:59	07:56		08:33 (6)	07:58	08:46
	21:59		21:03	19:47	15 07:42 (5)		14 08:47 (6)	16:27	16:00
16	05:10		06:03	07:01	07:58		08:31 (6)	08:00	08:47
	21:58		21:01	19:45	14 07:42 (5)		17 08:48 (6)	16:25	16:00
17	05:11		06:05	07:02	08:00		08:31 (6)	08:02	08:47
	21:56		20:59	19:42	12 07:42 (5)		17 08:48 (6)	16:23	16:00
18	05:13		06:07	07:04	08:02		08:30 (6)	08:04	08:48
	21:55		20:57	19:40	10 07:42 (5)		18 08:48 (6)	16:22	16:00
19	05:14		06:08	07:06	08:04		08:32 (6)	08:06	08:49
	21:54		20:54	19:37	7 07:40 (5)		15 08:47 (6)	16:20	16:01
20	05:16		06:10	07:08	08:06		08:34 (6)	08:08	08:50
	21:52		20:52	19:35	4 07:39 (5)		13 08:47 (6)	16:19	16:01
21	05:17		06:12	07:10	08:08		08:36 (6)	08:10	08:50
	21:51		20:50	19:32	18:18		10 08:46 (6)	16:18	16:01
22	05:19		06:14	07:12	08:10		08:39 (6)	08:12	08:51
	21:49		20:47	19:30	18:15		7 08:46 (6)	16:16	16:02
23	05:20		06:16	07:14	08:12		08:41 (6)	08:13	08:51
	21:48		20:45	19:27	18:13		3 08:44 (6)	16:15	16:02
24	05:22		06:18	07:16	08:14			08:15	08:52
	21:46		20:42	19:24	18:11			16:14	16:03
25	05:24		06:20	07:17	07:16			08:17	08:52
	21:45		20:40	19:22	17:08			16:12	16:04
26	05:25		06:22	07:19	07:18			08:19	08:52
	21:43		20:38	19:19	17:06			16:11	16:04
27	05:27		06:23	07:21	07:20			08:21	08:53
	21:41		20:35	19:17	17:04			16:10	16:05
28	05:29		06:25	07:23	07:22			08:22	08:53
	21:40		20:33	19:14	17:02			16:09	16:06
29	05:30		06:27	07:25	07:24			08:24	08:53
	21:38		20:30	19:12	17:00			16:08	16:07
30	05:32		06:29	07:27	07:26			08:26	08:53
	21:36		20:28	19:09	16:57			16:07	16:08
31	05:34		06:31		07:28			08:53	
	21:34		20:25		16:55			16:09	
Potential sun hours	519	464	383	327		254		227	
Total, worst case	148			92		214			
Sun reduction	0,49			0,40		0,31			
Oper. time red.	1,00			1,00		1,00			
Wind dir. red.	0,79			1,00		0,95			
Total reduction	0,39			0,40		0,30			
Total, real	58			37		63			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June
1	08:53	08:20	07:20	07:58 (6)	07:03	05:51
	16:10	17:04	18:02	11 08:09 (6)	20:03	21:54
2	08:53	08:19	07:18	08:00 (6)	07:00	05:48
	16:11	17:06	18:04	5 08:05 (6)	20:05	21:03
3	08:52	08:17	07:16	06:57	05:46	04:56
	16:13	17:08	18:06	20:07	21:05	21:57
4	08:52	08:15	07:13	06:55	05:44	04:55
	16:14	17:10	18:08	20:09	21:07	21:58
5	08:52	08:13	07:11	07:36 (1)	06:52	05:42
	16:15	17:12	18:10	1 07:37 (1)	20:11	21:09
6	08:51	08:11	07:08	07:33 (1)	06:50	05:40
	16:17	17:14	18:12	5 07:38 (1)	20:13	21:11
7	08:51	08:09	07:06	07:30 (1)	06:47	05:38
	16:18	17:16	18:14	8 07:38 (1)	20:15	21:13
8	08:50	08:07	07:03	07:28 (1)	06:45	05:36
	16:19	17:18	18:16	10 07:38 (1)	20:17	21:15
9	08:50	08:05	07:01	07:25 (1)	06:42	05:34
	16:21	17:21	18:18	12 07:37 (1)	20:19	21:17
10	08:49	08:03	06:58	07:23 (1)	06:40	05:32
	16:22	17:23	18:20	14 07:37 (1)	20:21	21:19
11	08:48	08:01	06:56	07:23 (1)	06:37	05:30
	16:24	17:25	18:22	13 07:36 (1)	20:23	21:20
12	08:47	07:59	06:53	07:25 (1)	06:35	05:28
	16:26	17:27	18:24	10 07:35 (1)	20:25	21:22
13	08:46	07:57	06:51	07:28 (1)	06:33	05:26
	16:27	17:29	18:26	3 07:31 (1)	20:27	21:24
14	08:46	07:55	06:48	06:30	05:24	04:50
	16:29	17:31	18:28	20:29	21:26	22:07
15	08:45	07:53	06:46	06:28	05:23	04:49
	16:31	17:33	18:30	20:31	21:28	22:08
16	08:44	07:50	06:43	06:25	05:21	04:49
	16:33	17:35	18:32	20:33	21:29	22:09
17	08:42	07:48	06:41	06:23	05:19	04:49
	16:34	17:37	18:34	20:34	21:31	22:09
18	08:41	07:46	06:38	06:20	05:17	04:49
	16:36	17:39	18:36	20:36	21:33	22:10
19	08:40	07:44	06:36	06:18	05:16	04:49
	16:38	17:42	18:38	20:38	21:35	22:10
20	08:39	07:41	08:08 (6)	06:33	06:16	05:14
	16:40	17:44	2 08:10 (6)	18:40	20:40	21:36
21	08:38	07:39	08:05 (6)	06:31	06:13	05:13
	16:42	17:46	6 08:11 (6)	18:42	20:42	21:38
22	08:36	07:37	08:03 (6)	06:28	06:11	05:11
	16:44	17:48	9 08:12 (6)	18:44	20:44	21:40
23	08:35	07:35	08:00 (6)	06:25	06:09	05:10
	16:46	17:50	12 08:12 (6)	18:46	20:46	21:41
24	08:33	07:32	07:58 (6)	06:23	06:47 (5)	06:06
	16:48	17:52	15 08:13 (6)	18:48	4 06:51 (5)	20:48
25	08:32	07:30	07:55 (6)	06:20	06:44 (5)	06:04
	16:50	17:54	17 08:12 (6)	18:50	7 06:51 (5)	20:50
26	08:30	07:28	07:55 (6)	06:18	06:42 (5)	06:02
	16:52	17:56	17 08:12 (6)	18:52	10 06:52 (5)	20:52
27	08:29	07:25	07:56 (6)	06:15	06:39 (5)	05:59
	16:54	17:58	16 08:12 (6)	18:54	12 06:51 (5)	20:54
28	08:27	07:23	07:56 (6)	06:13	06:37 (5)	05:57
	16:56	18:00	14 08:10 (6)	18:56	14 06:51 (5)	20:56
29	08:26		07:10	07:36 (5)	05:55	05:02
	16:58		19:58	14 07:50 (5)	20:58	21:50
30	08:24		07:08	07:37 (5)	05:53	05:00
	17:00		20:00	12 07:49 (5)	21:00	21:52
31	08:22		07:05	07:38 (5)		04:59
	17:02		20:01	8 07:46 (5)		21:53
Potential sun hours	244	270	366	422	499	517
Total, worst case		108	173		5	552
Sun reduction		0,24	0,34		0,52	0,48
Oper. time red.		1,00	1,00		1,00	1,00
Wind dir. red.		0,94	0,98		0,79	0,79
Total reduction		0,23	0,34		0,42	0,39
Total, real		25	59		2	217

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.surville@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: E - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December					
1	04:54	05:31 (16)	05:36	06:33	07:29	08:05 (1)	07:30	08:27			
	22:10	05:50 (16)	21:32	20:23	19:07	8	08:13 (1)	16:53	16:06		
2	04:54	05:32 (16)	05:37	06:35	07:31		08:03 (1)	07:32	08:29		
	22:09	05:51 (16)	21:30	20:20	19:04	11	08:14 (1)	16:51	16:05		
3	04:55	05:32 (16)	05:39	06:36	07:32		08:02 (1)	07:34	08:30		
	22:09	05:51 (16)	21:29	20:18	19:01	13	08:15 (1)	16:49	16:05		
4	04:56	05:33 (16)	05:41	06:38	07:34		08:02 (1)	07:36	08:32		
	22:08	05:51 (16)	21:27	20:15	18:59	13	08:15 (1)	16:47	16:04		
5	04:57	05:34 (16)	05:43	06:40	07:36		08:04 (1)	07:38	08:34		
	22:08	05:51 (16)	21:25	20:13	18:56	11	08:15 (1)	16:45	16:03		
6	04:58	05:33 (16)	05:45	06:42	07:38		08:06 (1)	07:40	08:35		
	22:07	05:50 (16)	21:23	20:10	18:54	9	08:15 (1)	16:43	16:03		
7	04:59	05:34 (16)	05:46	06:44	07:40		08:08 (1)	07:42	08:36		
	22:06	05:50 (16)	21:21	20:08	18:51	6	08:14 (1)	16:41	16:02		
8	05:00	05:35 (16)	05:48	06:46	07:42		08:10 (1)	07:44	08:38		
	22:06	05:49 (16)	21:18	20:05	18:49	3	08:13 (1)	16:39	16:02		
9	05:01	05:35 (16)	05:50	06:48	07:44			07:46	08:39		
	22:05	05:49 (16)	21:16	20:03	18:46			16:37	16:01		
10	05:02	05:36 (16)	05:52	06:49	07:46			07:48	08:40		
	22:04	05:48 (16)	21:14	20:00	18:44			16:35	16:01		
11	05:03	05:38 (16)	05:54	06:51	07:48			07:50	08:41		
	22:03	05:48 (16)	21:12	19:58	18:41			16:34	16:01		
12	05:05	05:40 (16)	05:55	06:53	07:50		08:33 (6)	07:52	08:43		
	22:02	05:47 (16)	21:10	19:55	8	07:38 (5)	18:39	8	08:41 (6)	16:32	16:00
13	05:06		05:57	06:55	07:28 (5)	07:52		08:30 (6)	07:54	08:44	
	22:01		21:08	19:53	12	07:40 (5)	18:37	13	08:43 (6)	16:30	16:00
14	05:07		05:59	06:57	07:26 (5)	07:54		08:29 (6)	07:56	08:45	
	22:00		21:06	19:50	14	07:40 (5)	18:34	15	08:44 (6)	16:28	16:00
15	05:09		06:01	06:59	07:26 (5)	07:56		08:28 (6)	07:58	08:46	
	21:59		21:03	19:47	14	07:40 (5)	18:32	16	08:44 (6)	16:27	16:00
16	05:10		06:03	07:01	07:28 (5)	07:58		08:27 (6)	08:00	08:47	
	21:58		21:01	19:45	12	07:40 (5)	18:29	17	08:44 (6)	16:25	16:00
17	05:11		06:05	07:02	07:30 (5)	08:00		08:28 (6)	08:02	08:47	
	21:56		20:59	19:42	10	07:40 (5)	18:27	16	08:44 (6)	16:23	16:00
18	05:13		06:07	07:04	07:32 (5)	08:02		08:30 (6)	08:04	08:48	
	21:55		20:57	19:40	7	07:39 (5)	18:25	14	08:44 (6)	16:22	16:00
19	05:14		06:08	07:06	07:33 (5)	08:04		08:32 (6)	08:06	08:49	
	21:54		20:54	19:37	4	07:37 (5)	18:22	11	08:43 (6)	16:20	16:01
20	05:16		06:10	07:08	07:35 (5)	08:06		08:34 (6)	08:08	08:50	
	21:52		20:52	19:35	1	07:36 (5)	18:20	8	08:42 (6)	16:19	16:01
21	05:17		06:12	07:10		08:08		08:36 (6)	08:10	08:50	
	21:51		20:50	19:32		18:18	5	08:41 (6)	16:18	16:01	
22	05:19		06:14	07:12		08:10		08:39 (6)	08:12	08:51	
	21:49		20:47	19:30		18:15	1	08:40 (6)	16:16	16:02	
23	05:20		06:16	07:14		08:12			08:13	08:51	
	21:48		20:45	19:27		18:13			16:15	16:02	
24	05:22		06:18	07:16		08:14			08:15	08:52	
	21:46		20:42	19:24		18:11			16:14	16:03	
25	05:24		06:20	07:17		07:16			08:17	08:52	
	21:45		20:40	19:22		17:08			16:12	16:04	
26	05:25		06:22	07:19		07:18			08:19	08:52	
	21:43		20:38	19:19		17:06			16:11	16:04	
27	05:27		06:23	07:21		07:20			08:21	08:53	
	21:41		20:35	19:17		17:04			16:10	16:05	
28	05:29		06:25	07:23		07:22			08:22	08:53	
	21:40		20:33	19:14		17:02			16:09	16:06	
29	05:30		06:27	07:25		07:24			08:24	08:53	
	21:38		20:30	19:12		17:00			16:08	16:07	
30	05:32		06:29	07:27		07:26			08:26	08:53	
	21:36		20:28	19:09		16:57			16:07	16:08	
31	05:34		06:31			07:28				08:53	
	21:34		20:25			16:55				16:09	
Potential sun hours	519	464	383		327		254		227		
Total, worst case	182			82		198					
Sun reduction	0,49			0,40		0,31					
Oper. time red.	1,00			1,00		1,00					
Wind dir. red.	0,79			1,00		0,95					
Total reduction	0,39			0,40		0,30					
Total, real	72			33		59					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: F - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6) Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December		
1	08:53 16:10	08:20 17:04	07:20 18:02	07:46 (6) 20:03	07:03 20:03	07:29 (5) 21:02	05:51 21:54	04:58 22:10	04:54 21:32	05:36 20:23	06:33 19:07	07:29 19:07	07:56 (1) 16:53	07:30 16:06
2	08:53 16:11	08:19 17:06	07:18 18:04	07:43 (6) 20:05	07:00 20:05	07:29 (5) 21:03	05:48 21:56	04:57 22:09	04:54 21:30	05:37 20:20	06:35 19:04	07:31 19:04	07:58 (1) 16:51	07:32 16:05
3	08:52 16:13	08:17 17:08	07:16 18:06	07:41 (6) 20:07	06:57 20:07	07:29 (5) 21:05	05:46 21:57	04:56 22:09	04:55 21:29	05:39 20:18	06:36 19:01	07:33 19:01	08:01 (1) 16:51	07:34 16:05
4	08:52 16:14	08:15 17:10	07:13 18:08	07:38 (6) 20:09	06:55 20:09	07:29 (5) 21:07	05:44 21:58	04:55 22:08	04:56 21:27	05:41 20:15	06:38 18:59	07:34 18:59	07:58 (1) 16:47	07:36 16:04
5	08:52 16:15	08:13 17:12	07:11 18:10	07:36 (6) 20:11	06:52 20:11	07:29 (5) 21:09	05:42 21:59	04:55 22:08	04:57 21:25	05:43 20:13	06:40 18:56	07:36 18:56	08:15 (6) 16:45	07:38 16:03
6	08:51 16:17	08:11 17:14	07:08 18:12	07:37 (6) 20:13	06:50 20:13	07:29 (5) 21:11	05:40 22:00	04:54 22:07	04:55 21:23	05:45 20:10	06:42 18:54	07:38 18:54	08:15 (6) 16:43	07:40 16:03
7	08:51 16:18	08:09 17:16	07:06 18:14	07:38 (6) 20:15	06:47 20:15	07:29 (5) 21:13	05:38 22:01	04:53 22:06	04:59 21:21	05:46 20:08	06:44 18:51	07:40 18:51	08:13 (6) 16:41	07:42 16:02
8	08:50 16:19	08:07 17:18	07:03 18:16	07:41 (6) 20:17	06:45 20:17	07:29 (5) 21:15	05:36 22:02	04:52 22:06	05:00 21:18	05:48 20:05	06:46 18:49	07:42 18:49	08:12 (6) 16:39	07:44 16:02
9	08:50 16:21	08:05 17:21	07:01 18:18	07:44 (6) 20:19	06:42 20:19	07:29 (5) 21:17	05:34 22:03	04:52 22:05	05:01 21:16	05:50 20:03	06:48 18:46	07:44 18:46	08:12 (6) 16:37	07:46 16:01
10	08:49 16:23	08:03 17:23	06:58 18:20	07:44 (6) 20:21	06:40 20:21	07:29 (5) 21:19	05:32 22:04	04:51 22:04	05:02 21:14	05:52 20:00	06:49 18:44	07:46 18:44	08:14 (6) 16:35	07:48 16:01
11	08:48 16:24	08:01 17:25	06:56 18:22	07:20 (1) 20:23	06:37 20:23	07:29 (5) 21:20	05:30 22:05	04:51 22:03	05:03 21:12	05:54 19:58	06:51 18:42	07:21 (5) 18:42	08:16 (6) 16:34	07:50 16:01
12	08:47 16:26	07:59 17:27	06:53 18:24	07:18 (1) 20:25	06:35 20:25	07:29 (5) 21:22	05:28 22:06	04:50 22:02	05:05 21:10	05:56 19:55	06:53 18:39	07:21 (5) 18:39	08:18 (6) 16:32	07:52 16:00
13	08:46 16:27	07:57 17:29	06:51 18:26	07:15 (1) 20:27	06:33 20:27	07:29 (5) 21:24	05:26 22:07	04:50 22:01	05:06 21:08	05:57 19:53	06:55 18:37	07:23 (5) 18:37	08:25 (6) 16:30	07:54 16:00
14	08:46 16:29	07:55 17:31	06:48 18:28	07:13 (1) 20:29	06:30 20:29	07:29 (5) 21:26	05:24 22:07	04:50 22:00	05:07 21:06	05:59 19:50	06:57 18:34	07:24 (5) 18:34	08:24 (6) 16:30	07:54 16:00
15	08:45 16:31	07:53 17:33	06:46 18:30	07:10 (1) 20:31	06:28 20:31	07:29 (5) 21:28	05:23 22:08	04:49 21:59	05:09 21:03	06:01 19:47	06:59 18:32	07:26 (5) 18:32	08:25 (6) 16:34	07:56 16:00
16	08:44 16:33	07:50 17:35	06:43 18:32	07:11 (1) 20:33	06:25 20:33	07:29 (5) 21:29	05:21 22:09	04:49 21:58	05:10 21:01	06:03 19:45	07:01 18:29	07:28 (5) 18:29	08:26 (6) 16:32	07:58 16:00
17	08:42 16:34	07:48 17:37	06:41 18:34	07:14 (1) 20:34	06:23 20:34	07:29 (5) 21:31	05:19 22:09	04:49 21:56	05:11 20:59	06:05 19:42	07:02 18:27	07:30 (5) 18:27	08:20 (6) 16:30	08:00 16:00
18	08:41 16:36	07:46 17:39	06:38 18:36	07:16 (1) 20:36	06:20 20:36	07:29 (5) 21:33	05:17 22:10	04:49 21:55	05:13 20:57	06:07 19:40	07:04 18:25	07:31 (5) 18:25	08:24 (6) 16:30	08:04 16:00
19	08:40 16:38	07:44 17:42	06:36 18:38	07:18 (1) 20:38	06:18 20:38	07:29 (5) 21:35	05:16 22:10	04:49 21:54	05:14 20:54	06:09 19:37	07:06 18:22	07:32 (5) 18:22	08:25 (6) 16:30	08:06 16:01
20	08:39 16:40	07:41 17:44	06:33 18:40	07:23 (1) 20:40	06:16 20:40	07:29 (5) 21:36	05:14 22:10	04:49 21:52	05:16 20:52	06:10 19:35	07:08 18:20	07:33 (5) 18:20	08:26 (6) 16:30	08:08 16:01
21	08:38 16:42	07:39 17:46	06:31 18:42	07:24 (1) 20:42	06:13 20:42	07:29 (5) 21:38	05:13 22:11	04:49 21:51	05:17 20:50	06:12 19:32	07:10 18:18	07:34 (5) 18:18	08:27 (6) 16:30	08:10 16:01
22	08:36 16:44	07:37 17:48	06:28 18:44	07:25 (1) 20:44	06:11 20:44	07:29 (5) 21:40	05:11 22:11	04:49 21:49	05:19 20:47	06:14 19:30	07:12 18:15	07:35 (5) 18:15	08:28 (6) 16:30	08:12 16:01
23	08:35 16:46	07:35 17:50	06:25 18:46	07:26 (1) 20:46	06:09 20:46	07:29 (5) 21:41	05:10 22:11	04:49 21:48	05:20 20:45	06:16 19:27	07:14 18:13	07:36 (5) 18:13	08:29 (6) 16:30	08:13 16:01
24	08:33 16:48	07:32 17:52	06:23 18:48	07:27 (1) 20:48	06:06 20:48	07:29 (5) 21:43	05:08 22:11	04:50 21:46	05:22 20:42	06:18 19:24	07:16 18:11	07:37 (5) 18:11	08:30 (6) 16:30	08:15 16:01
25	08:32 16:50	07:30 17:54	06:20 18:50	07:28 (1) 20:50	06:04 20:50	07:29 (5) 21:44	05:07 22:11	04:50 21:45	05:24 20:40	06:20 19:22	07:17 18:08	07:38 (5) 18:08	08:31 (6) 16:30	08:17 16:04
26	08:30 16:52	07:28 17:56	06:18 18:52	07:29 (1) 20:52	06:02 20:52	07:29 (5) 21:46	05:05 22:11	04:51 21:43	05:25 20:38	06:22 19:19	07:19 18:06	07:39 (5) 18:06	08:32 (6) 16:30	08:19 16:04
27	08:29 16:54	07:25 17:58	06:15 18:54	07:30 (1) 20:54	05:59 20:54	07:29 (5) 21:47	05:04 22:11	04:51 21:41	05:27 20:35	06:23 19:17	07:21 18:00	07:40 (5) 18:00	08:33 (6) 16:30	08:21 16:05
28	08:27 16:56	07:23 18:00	06:13 18:56	06:39 (5) 20:56	05:57 20:56	07:29 (5) 21:49	05:03 22:11	04:52 21:40	05:29 20:33	06:25 19:14	07:23 18:02	07:51 (1) 18:02	08:34 (6) 16:30	08:22 16:05
29	08:26 16:58	07:21 18:02	06:10 19:58	06:40 (5) 20:58	05:55 20:58	07:29 (5) 21:50	05:02 22:10	04:52 21:38	05:30 20:30	06:27 19:12	07:25 18:02	07:52 (1) 18:02	08:35 (6) 16:30	08:24 16:07
30	08:24 17:00	07:19 18:03	06:08 19:58	07:32 (5) 21:00	05:53 21:00	07:29 (5) 21:52	05:00 22:10	04:53 21:36	05:32 20:30	06:29 19:09	07:27 18:02	07:54 (1) 18:02	08:36 (6) 16:30	08:26 16:08
31	08:22 17:02	07:17 18:06	06:07 19:57	07:29 (5) 21:02	05:54 21:02	07:29 (5) 21:53	04:59 22:10	05:34 21:34	06:31 20:25	07:28 19:09	07:28 18:02	07:55 (1) 18:02	08:37 (6) 16:30	08:53 16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227		
Total, worst case			153		17				86		88			
Sun reduction		0,24	0,34		0,39				0,40		0,31			
Oper. time red.		1,00	1,00		1,00				1,00		1,00			
Wind dir. red.		0,96	0,98		1,00				1,00		0,97			
Total reduction		0,24	0,33		0,39				0,39		0,30			
Total, real		0	51		7				34		26			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: G - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (7)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, shadow reduction, and operational time. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: H - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,41	2,36	4,03	5,55	8,35	8,36	8,16	7,72	5,06	3,23	1,33	0,98

Operational time		
0	1	Sum
4.380	4.380	8.760

	January	February	March	April	May	June					
1	08:53	08:20	16:27 (1)	07:20	17:11 (5)	07:02	05:50	20:00 (18)	04:58	20:39 (15)	
	16:10	17:04	4 16:31 (1)	18:02	21 17:32 (5)	20:03	21:01	25 20:25 (18)	21:54	30 21:09 (14)	
2	08:53	08:19	16:26 (1)	07:18	17:12 (5)	07:00	05:48	20:00 (18)	04:57	20:39 (15)	
	16:11	17:06	7 16:33 (6)	18:04	20 17:32 (5)	20:05	21:03	25 20:25 (18)	21:56	30 21:09 (14)	
3	08:52	08:17	16:26 (1)	07:15	17:11 (5)	06:57	05:46	19:59 (18)	04:56	20:39 (15)	
	16:13	17:08	9 16:35 (6)	18:06	20 17:31 (5)	20:07	21:05	26 20:25 (18)	21:57	30 21:09 (14)	
4	08:52	08:15	16:25 (1)	07:13	17:12 (5)	06:55	05:44	19:59 (18)	04:55	20:39 (15)	
	16:14	17:10	12 16:37 (6)	18:08	19 17:31 (5)	20:09	21:07	26 20:25 (18)	21:58	31 21:10 (14)	
5	08:52	08:13	16:25 (1)	07:11	17:13 (5)	06:52	05:42	19:59 (18)	04:54	20:39 (15)	
	16:15	17:12	15 16:40 (6)	18:10	16 17:29 (5)	20:11	21:09	26 20:25 (18)	21:59	30 21:10 (14)	
6	08:51	08:11	16:25 (1)	07:08	17:14 (5)	06:50	05:40	19:59 (18)	04:54	20:39 (15)	
	16:16	17:14	17 16:42 (6)	18:12	14 17:28 (5)	20:13	21:11	25 20:24 (18)	22:00	30 21:09 (14)	
7	08:51	08:09	16:25 (1)	07:06	17:16 (5)	06:47	05:38	19:59 (18)	04:53	20:39 (15)	
	16:18	17:16	20 16:45 (6)	18:14	9 17:25 (5)	20:15	21:13	25 20:24 (18)	22:01	31 21:10 (14)	
8	08:50	08:07	16:26 (1)	07:03	17:12 (5)	06:45	05:36	19:59 (18)	04:52	20:39 (15)	
	16:19	17:18	18 16:44 (6)	18:16	20:17	21:15	24 20:23 (18)	22:02	31 21:10 (14)		
9	08:49	08:05	16:26 (1)	07:01	17:11 (5)	06:42	05:34	20:00 (18)	04:52	20:40 (15)	
	16:21	17:20	18 16:44 (6)	18:18	20:19	21:17	22 20:22 (18)	22:03	30 21:10 (14)		
10	08:49	08:03	16:26 (1)	06:58	17:10 (5)	06:40	05:32	20:01 (18)	04:51	20:39 (15)	
	16:22	17:23	16 16:42 (1)	18:20	20:21	21:18	22 20:23 (18)	22:04	31 21:10 (14)		
11	08:48	08:01	16:28 (1)	06:56	17:11 (5)	06:37	05:30	20:02 (18)	04:51	20:40 (15)	
	16:24	17:25	14 16:42 (1)	18:22	20:23	21:20	19 20:21 (18)	22:05	30 21:10 (14)		
12	08:47	07:59	16:29 (1)	06:53	17:12 (5)	06:35	05:28	20:02 (18)	04:50	20:40 (15)	
	16:26	17:27	12 16:41 (1)	18:24	20:25	21:22	18 20:20 (18)	22:06	30 21:10 (14)		
13	08:46	07:57	16:32 (1)	06:51	17:13 (5)	06:32	05:26	20:03 (18)	04:50	20:41 (15)	
	16:27	17:29	6 16:38 (1)	18:26	20:27	21:24	16 20:19 (18)	22:07	30 21:11 (14)		
14	08:45	07:55	16:30	06:48	17:14 (5)	06:30	05:24	20:06 (18)	04:49	20:40 (15)	
	16:29	17:31	18:28	20:29	21:26	12 20:18 (18)	22:07	30 21:10 (14)			
15	08:44	07:52	16:30	06:46	17:15 (5)	06:28	05:22	20:08 (18)	04:49	20:40 (15)	
	16:31	17:33	18:30	20:30	21:28	7 20:15 (18)	22:08	30 21:10 (14)			
16	08:43	07:50	16:30	06:43	17:16 (5)	06:25	05:21	20:09 (18)	04:49	20:41 (15)	
	16:32	17:35	18:32	20:32	21:29	22:08	30 21:11 (14)				
17	08:42	07:48	16:31	06:41	17:17 (5)	06:23	05:19	20:10 (18)	04:49	20:41 (15)	
	16:34	17:37	18:34	20:34	21:31	22:09	30 21:11 (14)				
18	08:41	07:46	16:31	06:38	17:18 (5)	06:20	05:17	20:11 (18)	04:49	20:41 (15)	
	16:36	17:39	18:36	20:36	21:33	22:09	30 21:11 (14)				
19	08:40	07:44	16:32	06:35	17:19 (5)	06:18	05:16	20:12 (18)	04:49	20:41 (15)	
	16:38	17:41	18:38	20:38	21:34	7 21:00 (14)	22:10	30 21:11 (14)			
20	08:39	07:41	16:33	06:33	17:20 (5)	06:15	05:14	20:13 (18)	04:49	20:41 (15)	
	16:40	17:43	18:40	20:40	21:36	11 21:02 (14)	22:10	30 21:11 (14)			
21	08:37	07:39	16:34	06:30	17:21 (5)	06:13	05:12	20:14 (18)	04:49	20:41 (15)	
	16:42	17:46	18:42	20:42	21:38	16 21:03 (14)	22:10	30 21:11 (14)			
22	08:36	07:37	16:35	06:28	17:22 (5)	06:11	05:11	20:15 (18)	04:49	20:42 (15)	
	16:44	17:48	18:44	20:44	21:39	19 21:04 (14)	22:11	30 21:12 (14)			
23	08:35	07:34	17:18 (5)	06:25	18:01 (2)	06:08	20:11 (17)	05:09	20:44 (15)	04:49	20:42 (15)
	16:45	17:50	3 17:21 (5)	18:46	11 18:12 (2)	20:46	6 20:17 (17)	21:41	22 21:06 (14)	22:11	30 21:12 (14)
24	08:33	07:32	17:16 (5)	06:23	17:58 (2)	06:06	20:09 (17)	05:08	20:42 (15)	04:50	20:42 (15)
	16:47	17:52	7 17:23 (5)	18:48	18 18:16 (2)	20:48	10 20:19 (17)	21:43	24 21:06 (14)	22:11	30 21:12 (14)
25	08:32	07:30	17:14 (5)	06:20	17:55 (2)	06:04	20:06 (18)	05:07	20:42 (15)	04:50	20:43 (15)
	16:49	17:54	11 17:25 (5)	18:50	22 18:17 (2)	20:50	14 20:20 (17)	21:44	24 21:06 (14)	22:11	30 21:13 (14)
26	08:30	07:27	17:13 (5)	06:18	17:54 (2)	06:02	20:05 (18)	05:05	20:41 (15)	04:50	20:43 (15)
	16:51	17:56	15 17:28 (5)	18:52	25 18:19 (2)	20:52	17 20:22 (17)	21:46	26 21:07 (14)	22:11	30 21:13 (14)
27	08:29	07:25	17:12 (5)	06:15	17:51 (2)	05:59	20:03 (18)	05:04	20:41 (15)	04:51	20:44 (15)
	16:53	17:58	17 17:29 (5)	18:54	29 18:20 (2)	20:54	20 20:23 (17)	21:47	27 21:08 (14)	22:11	29 21:13 (14)
28	08:27	07:23	17:12 (5)	06:13	17:51 (2)	05:57	20:02 (18)	05:03	20:40 (15)	04:51	20:43 (15)
	16:55	18:00	20 17:32 (5)	18:56	30 18:21 (2)	20:56	22 20:24 (17)	21:49	28 21:08 (14)	22:11	30 21:13 (14)
29	08:25	07:19	16:30	06:10	18:49 (2)	05:55	20:01 (18)	05:01	20:40 (15)	04:52	20:44 (15)
	16:57	18:02	19:57	32 19:21 (2)	20:58	24 20:25 (17)	21:50	28 21:08 (14)	22:10	30 21:14 (14)	
30	08:24	07:17	16:31	06:07	18:49 (2)	05:53	20:01 (18)	05:00	20:40 (15)	04:53	20:43 (15)
	17:00	18:05	19:59	33 19:22 (2)	21:00	24 20:25 (18)	21:52	29 21:09 (14)	22:10	31 21:14 (14)	
31	08:22	07:10	16:32	06:05	18:47 (2)	05:51	04:59	20:39 (15)			
	17:02	18:07	20:01	35 19:22 (2)	21:53	30 21:09 (14)					
Potential sun hours	244	270	366	422	499	517					
Total, worst case		241	354	422	499	517					904
Sun reduction		0,24	0,34	0,39	0,42	0,44					0,48
Oper. time red.		1,00	1,00	1,00	1,00	1,00					1,00
Wind dir. red.		0,84	0,97	0,96	0,92	0,92					0,87
Total reduction		0,21	0,33	0,38	0,42	0,44					0,82
Total, real		50	117	137	157	167					382

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilė / r.survilė@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: H - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (8)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (July to December) and rows for days (1 to 31). Each cell contains a grid of start/end times and counts in parentheses. Summary rows at the bottom show 'Potential sun hours' and various reduction metrics.

Table layout: For each day in each month the following matrix apply

Matrix with columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: I - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (9)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times and shadow reduction percentages.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)



Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: J - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day of the month, showing sun rise/set times, minutes with flicker, and total reduction. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: K - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (13)
Assumptions for shadow calculations
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for each day (1-31) showing sun rise/set times, shadow reduction, and operational time. Includes summary rows for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March		April	May	June	
1	08:53	08:20	07:20		07:03	05:51	04:58	
	16:10	17:04	18:02		20:03	21:02	21:54	
2	08:53	08:19	07:18		07:00	05:48	04:57	
	16:11	17:06	18:04		20:05	21:04	21:56	
3	08:52	08:17	07:16		06:58	05:46	04:56	
	16:13	17:08	18:06		20:07	21:05	21:57	
4	08:52	08:15	07:13		06:55	05:44	04:55	
	16:14	17:10	18:08		20:09	21:07	21:58	
5	08:52	08:13	07:11		06:52	05:42	04:55	
	16:15	17:12	18:10		20:11	21:09	21:59	
6	08:51	08:11	07:08		06:50	05:40	04:54	
	16:17	17:14	18:12		20:13	21:11	22:00	
7	08:51	08:09	07:06		06:47	05:38	04:53	
	16:18	17:16	18:14		20:15	21:13	22:01	
8	08:50	08:07	07:03		06:45	05:36	04:52	05:30 (18)
	16:19	17:18	18:16		20:17	21:15	22:02	1 05:31 (18)
9	08:50	08:05	07:01	07:25 (6)	06:42	05:34	04:52	05:27 (18)
	16:21	17:21	18:18	3 07:28 (6)	20:19	21:17	22:03	6 05:33 (18)
10	08:49	08:03	06:58	07:23 (6)	06:40	05:32	04:51	05:26 (18)
	16:23	17:23	18:20	5 07:28 (6)	20:21	21:19	22:04	9 05:35 (18)
11	08:48	08:01	06:56	07:20 (6)	06:37	05:30	04:51	05:25 (18)
	16:24	17:25	18:22	8 07:28 (6)	20:23	21:20	22:05	10 05:35 (18)
12	08:47	07:59	06:53	07:18 (6)	06:35	05:28	04:50	05:25 (18)
	16:26	17:27	18:24	9 07:27 (6)	20:25	21:22	22:06	12 05:37 (18)
13	08:46	07:57	06:51	07:17 (6)	06:33	05:26	04:50	05:25 (18)
	16:27	17:29	18:26	8 07:25 (6)	20:27	21:24	22:07	12 05:37 (18)
14	08:46	07:55	06:48	07:20 (6)	06:30	05:24	04:50	05:25 (18)
	16:29	17:31	18:28	3 07:23 (6)	20:29	21:26	22:07	13 05:38 (18)
15	08:45	07:53	06:46		06:28	05:23	04:49	05:24 (18)
	16:31	17:33	18:30		20:31	21:28	22:08	14 05:38 (18)
16	08:44	07:50	06:43		06:25	05:21	04:49	05:24 (18)
	16:33	17:35	18:32		20:33	21:29	22:09	15 05:39 (18)
17	08:42	07:48	06:41		06:23	05:19	04:49	05:24 (18)
	16:34	17:37	18:34		20:35	21:31	22:09	15 05:39 (18)
18	08:41	07:46	06:38		06:20	05:17	04:49	05:24 (18)
	16:36	17:39	18:36		20:36	21:33	22:10	15 05:39 (18)
19	08:40	07:44	06:36		06:18	05:16	04:49	05:24 (18)
	16:38	17:42	18:38		20:38	21:35	22:10	16 05:40 (18)
20	08:39	07:42	06:33		06:16	05:14	04:49	05:24 (18)
	16:40	17:44	18:40		20:40	21:36	22:10	16 05:40 (18)
21	08:38	07:39	06:31		06:13	05:13	04:49	05:25 (18)
	16:42	17:46	18:42		20:42	21:38	22:11	16 05:41 (18)
22	08:36	07:37	06:28		06:11	05:11	04:49	05:25 (18)
	16:44	17:48	18:44		20:44	21:40	22:11	16 05:41 (18)
23	08:35	07:35	06:25		06:09	05:10	04:50	05:25 (18)
	16:46	17:50	18:46		20:46	21:41	22:11	16 05:41 (18)
24	08:33	07:32	06:23		06:06	05:08	04:50	05:26 (18)
	16:48	17:52	18:48		20:48	21:43	22:11	16 05:42 (18)
25	08:32	07:30	06:20		06:04	05:07	04:50	05:26 (18)
	16:50	17:54	18:50		20:50	21:44	22:11	15 05:41 (18)
26	08:30	07:28	06:18		06:02	05:05	04:51	05:26 (18)
	16:52	17:56	18:52		20:52	21:46	22:11	15 05:41 (18)
27	08:29	07:25	06:15		05:59	05:04	04:51	05:27 (18)
	16:54	17:58	18:54		20:54	21:47	22:11	14 05:41 (18)
28	08:27	07:23	06:13		05:57	05:03	04:52	05:27 (18)
	16:56	18:00	18:56		20:56	21:49	22:11	14 05:41 (18)
29	08:26		07:10		05:55	05:02	04:52	05:28 (18)
	16:58		19:58		20:58	21:50	22:10	13 05:41 (18)
30	08:24		07:08		05:53	05:00	04:53	05:29 (18)
	17:00		20:00		21:00	21:52	22:10	12 05:41 (18)
31	08:22		07:05			04:59		
	17:02		20:01			21:53		
Potential sun hours	244	270	366		422	499	517	
Total, worst case			36					301
Sun reduction			0,34					0,48
Oper. time red.			1,00					1,00
Wind dir. red.			0,99					0,77
Total reduction			0,34					0,38
Total, real			12					114

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
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+370 37 407548
Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: L - Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	July	August	September	October	November	December		
1	04:54	05:29 (18)	05:36	06:33	07:29	07:56 (6)	07:30	08:27
	22:10	05:40 (18)	21:32	20:23	19:07	08:06 (6)	16:53	16:06
2	04:54	05:30 (18)	05:37	06:35	07:31	07:58 (6)	07:32	08:29
	22:09	05:40 (18)	21:30	20:20	19:04	08:06 (6)	16:51	16:05
3	04:55	05:31 (18)	05:39	06:37	07:33	08:00 (6)	07:34	08:31
	22:09	05:39 (18)	21:29	20:18	19:01	08:06 (6)	16:49	16:05
4	04:56	05:33 (18)	05:41	06:38	07:34	08:02 (6)	07:36	08:32
	22:08	05:38 (18)	21:27	20:15	18:59	08:06 (6)	16:47	16:04
5	04:57		05:43	06:40	07:36	08:04 (6)	07:38	08:34
	22:08		21:25	20:13	18:56	08:05 (6)	16:45	16:03
6	04:58		05:45	06:42	07:38		07:40	08:35
	22:07		21:23	20:10	18:54		16:43	16:03
7	04:59		05:46	06:44	07:40		07:42	08:36
	22:06		21:21	20:08	18:51		16:41	16:02
8	05:00		05:48	06:46	07:42		07:44	08:38
	22:06		21:18	20:05	18:49		16:39	16:02
9	05:01		05:50	06:48	07:44		07:46	08:39
	22:05		21:16	20:03	18:46		16:37	16:01
10	05:02		05:52	06:50	07:46		07:48	08:40
	22:04		21:14	20:00	18:44		16:35	16:01
11	05:03		05:54	06:51	07:48		07:50	08:41
	22:03		21:12	19:58	18:42		16:34	16:01
12	05:05		05:56	06:53	07:50		07:52	08:43
	22:02		21:10	19:55	18:39		16:32	16:00
13	05:06		05:57	06:55	07:52		07:54	08:44
	22:01		21:08	19:53	18:37		16:30	16:00
14	05:07		05:59	06:57	07:54		07:56	08:45
	22:00		21:06	19:50	18:34		16:28	16:00
15	05:09		06:01	06:59	07:56		07:58	08:46
	21:59		21:03	19:48	18:32		16:27	16:00
16	05:10		06:03	07:01	07:58		08:00	08:47
	21:58		21:01	19:45	18:29		16:25	16:00
17	05:11		06:05	07:02	08:00		08:02	08:48
	21:56		20:59	19:42	18:27		16:24	16:00
18	05:13		06:07	07:04	08:02		08:04	08:48
	21:55		20:57	19:40	18:25		16:22	16:00
19	05:14		06:09	07:06	08:04		08:06	08:49
	21:54		20:54	19:37	18:22		16:20	16:01
20	05:16		06:10	07:08	08:06		08:08	08:50
	21:52		20:52	19:35	18:20		16:19	16:01
21	05:17		06:12	07:10	08:08		08:10	08:50
	21:51		20:50	19:32	18:18		16:18	16:01
22	05:19		06:14	07:12	08:10		08:12	08:51
	21:49		20:47	19:30	18:15		16:16	16:02
23	05:20		06:16	07:14	08:12		08:13	08:51
	21:48		20:45	19:27	18:13		16:15	16:02
24	05:22		06:18	07:16	08:14		08:15	08:52
	21:46		20:42	19:24	18:11		16:14	16:03
25	05:24		06:20	07:17	07:16		08:17	08:52
	21:45		20:40	19:22	17:08		16:12	16:04
26	05:25		06:22	07:19	07:18		08:19	08:52
	21:43		20:38	19:19	17:06		16:11	16:04
27	05:27		06:23	07:21	07:20		08:21	08:53
	21:41		20:35	19:17	17:04		16:10	16:05
28	05:29		06:25	07:23	07:22		08:22	08:53
	21:40		20:33	19:14	17:02		16:09	16:06
29	05:30		06:27	07:25	07:24		08:24	08:53
	21:38		20:30	19:12	17:00		16:08	16:07
30	05:32		06:29	07:27	07:26	07:57 (6)	08:26	08:53
	21:36		20:28	19:09	16:57	08:04 (6)	16:07	16:08
31	05:34		06:31		07:28			08:53
	21:34		20:25		16:55		16:09	16:09
Potential sun hours	519	464	383	327		254		227
Total, worst case	34				29			
Sun reduction	0,49			0,40	0,31			
Oper. time red.	1,00			1,00	1,00			
Wind dir. red.	0,77			0,99	0,99			
Total reduction	0,38			0,40	0,31			
Total, real	13			3	9			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar

Calculation: Suminis poveikis Enercon E82 Shut downShadow receptor: M - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (15)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:51	04:58	04:54	05:36	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:05
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:55	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:24	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:03
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:02
9	08:49	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:21	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:01
12	08:47	07:59	06:53	06:35	05:28	04:50	05:05	05:55	06:53	07:50	07:52	08:42
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:33	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:50	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
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17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:47
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	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:34	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:13	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:18	16:01
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	16:44	17:48	18:44	20:44	21:39	22:11	21:49	20:47	19:29	18:15	16:16	16:02
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25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:15	08:17	08:52
	16:50	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:27	06:18	06:02	05:05	04:51	05:25	06:22	07:19	08:17	08:19	08:52
	16:52	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
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	16:54	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:52	05:29	06:25	07:23	08:21	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:01	16:09	16:06
29	08:25		07:10	05:55	05:02	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

6 VE Jurbudpiø ir Bridpiø k., Āakiø raj.

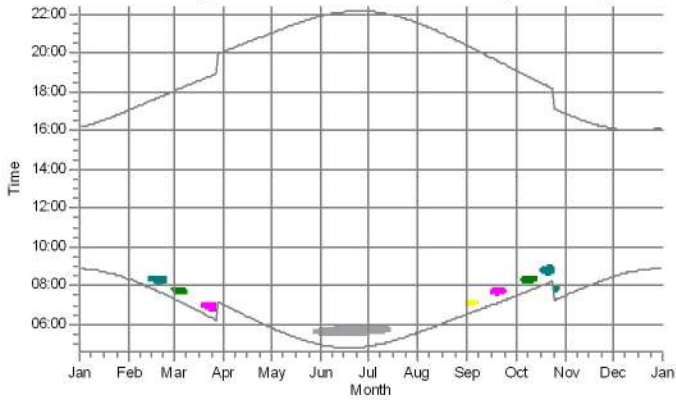
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Calculated:
2021.06.16 15:41/3.4.415

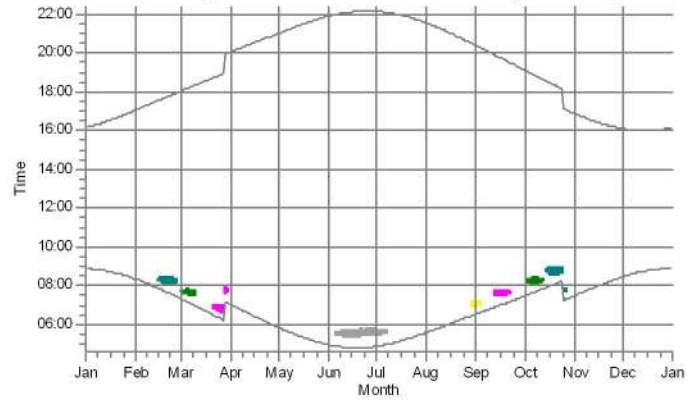
SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E82 Shut down

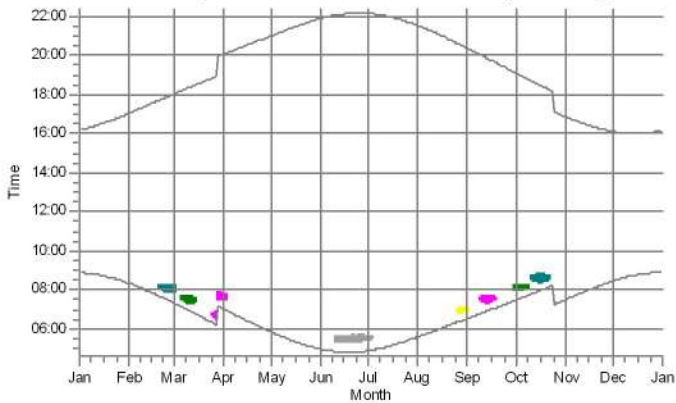
A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)*



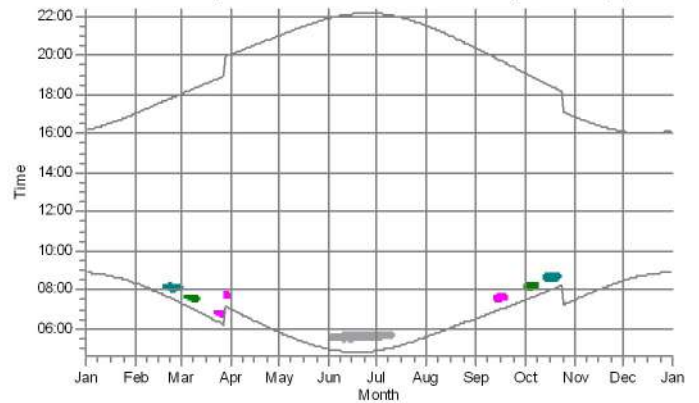
B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)*



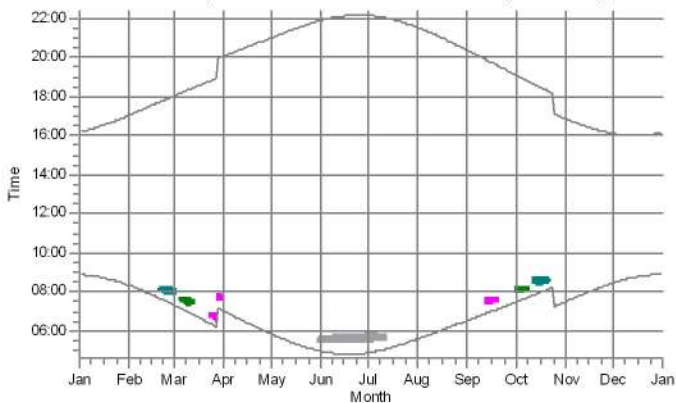
C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)*



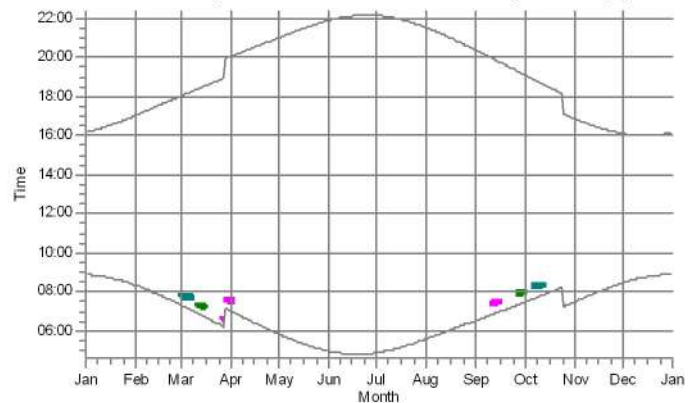
D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)



E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)



F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)



WTGs

- 1: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (1)
- 2: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (2)
- 5: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)

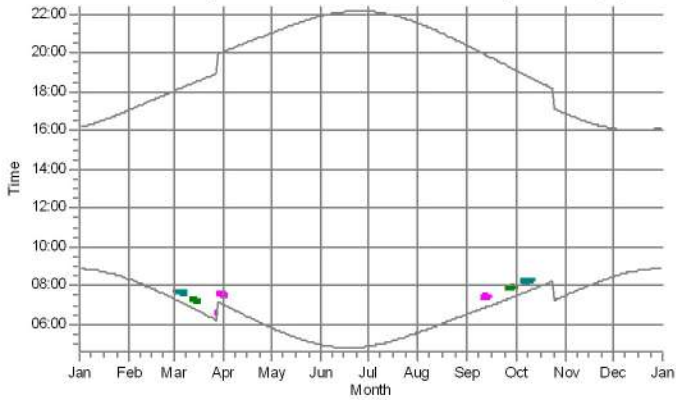
- 6: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)
- 16: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (11)

* Results reduced by flicker curtailment

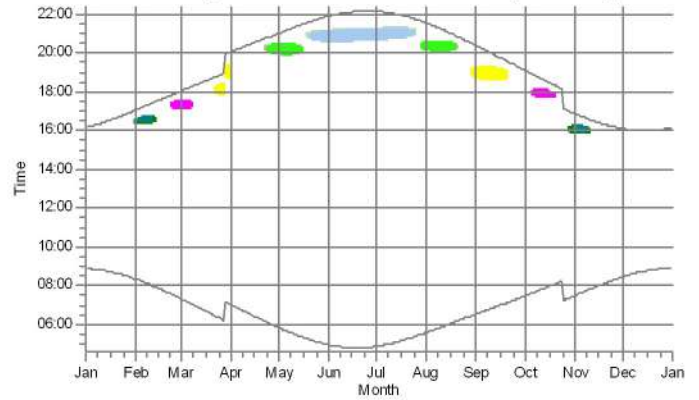
SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E82 Shut down

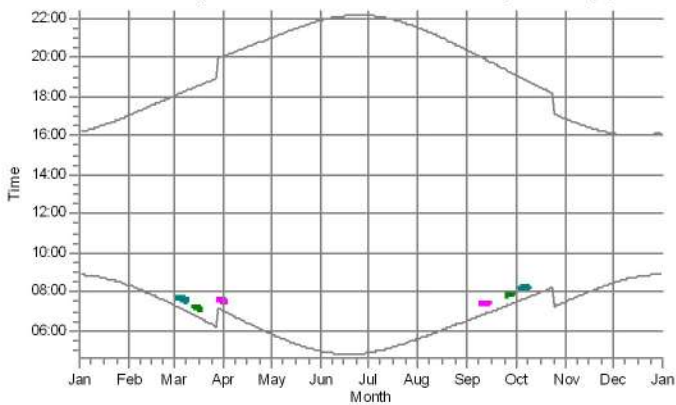
G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)



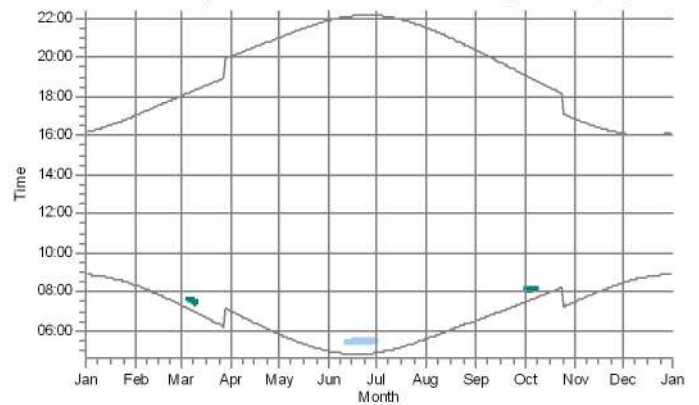
H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)*



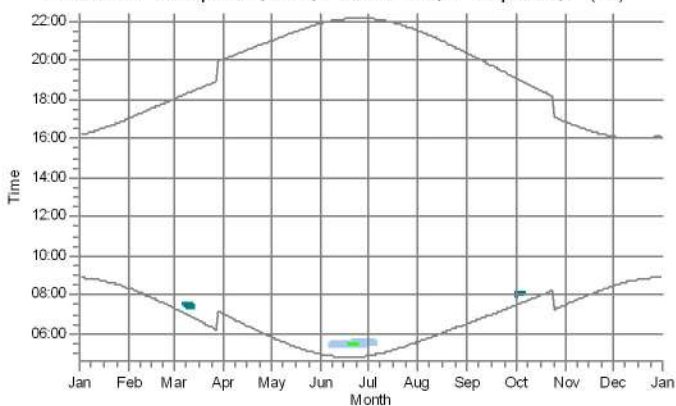
I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)



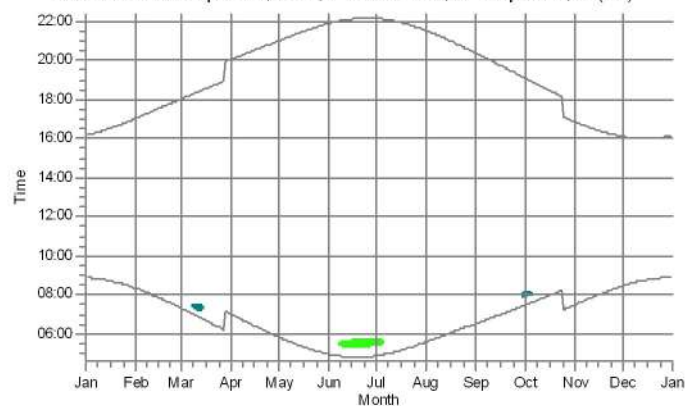
J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)



K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)



L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)



WTGs

- 1: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (1)
- 2: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (2)
- 5: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (9)
- 6: ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (10)

- 14: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (9)
- 15: NORDEX N149/4.0-4.5 4500 149.0 IOI hub: 165,0 m (TOT: 239,5 m) (10)
- 17: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (12)
- 18: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IOI hub: 161,0 m (TOT: 240,0 m) (13)

* Results reduced by flicker curtailment

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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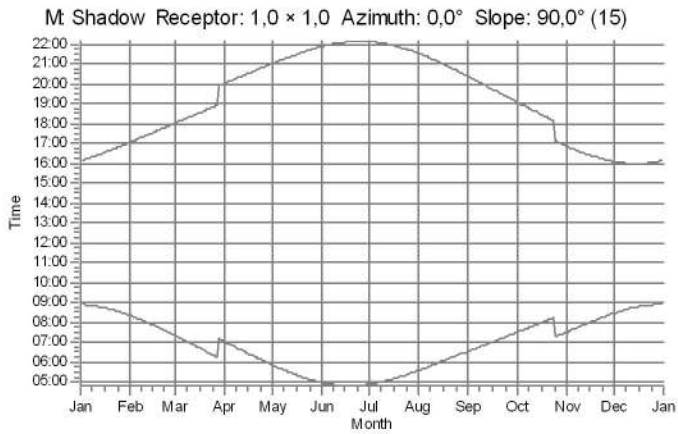
Raminta Survilè / r.survilè@infraplanas.lt

Calculated:

2021.06.16 15:41/3.4.415

SHADOW - Calendar, graphical

Calculation: Suminis poveikis Enercon E82 Shut down



WTGs

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 1 - ENERCON E-82 2000 82.0 IOI hub: 78,3 m (TOT: 119,3 m) (1)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns for months (January to December) and 31 rows of daily data. Each cell contains a time range (e.g., 08:53 | 16:10) or a date range (e.g., 16:26-16:31/4). Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 2 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and minutes with flicker. Includes a summary row at the bottom for 'Potential sun hours' and 'Sum of minutes with flicker'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 3 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (7)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:22	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
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	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
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	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
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24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 4 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:01	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:30	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:30
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:28	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:26	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:33
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:22	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:20	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:47	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:18	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:52	18:36	16:30	16:00
14	08:45	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:05	19:50	18:34	16:28	16:00
15	08:44	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:30	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:43	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:00	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:08	21:57	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	07:59	08:02	08:47
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:01	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:09	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:35	06:18	05:16	04:49	05:14	06:08	07:06	08:03	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:15	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:37	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:10	21:51	20:49	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:11	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:34	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:10	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	08:15	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:17	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:19	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	08:21	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:39	20:33	19:14	18:02	16:09	16:06
29	08:25		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:23	08:24	08:53
	16:57		19:57	20:58	21:50	22:10	21:38	20:30	19:11	18:00	16:08	16:07
30	08:24		07:07	05:53	05:00	04:53	05:32	06:29	07:27	08:25	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	227
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

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Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 5 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (9)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a matrix of sun rise/set times and shadow flicker data.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 6 - ENERCON E-82 2000 82.0 !OI hub: 78,3 m (TOT: 119,3 m) (10)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a time range (hh:mm) and a numerical value representing shadow minutes. Summary rows at the bottom show 'Potential sun hours' and 'Sum of minutes with flicker' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 7 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (2)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:07	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:53	06:51	07:48	07:50	08:42
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:47	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:00
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:11	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 8 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (3)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:11	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 9 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (4)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:10	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
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Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 10 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (5)
 Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:34	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:15	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:12	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:50	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:36	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:22	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:32	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:06	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:56	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:05	08:08	08:50
	16:40	17:43	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:07	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:09	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:11	08:13	08:51
	16:45	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:13	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:23	06:20	07:17	07:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	17:08	16:12	16:03
26	08:30	07:27	06:18	06:02	05:05	04:50	05:25	06:21	07:19	07:18	08:19	08:52
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	17:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	07:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	17:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:28	06:25	07:23	07:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	17:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	07:24	08:24	08:53
	16:57		19:58	20:58	21:50	22:10	21:38	20:30	19:12	16:59	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	07:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	16:57	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 11 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (6) Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
 0 1 Sum
 4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:02	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:03	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:16	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:33	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:24	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:12	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:08	05:09	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:47	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:13	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:21	07:19	08:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:29	06:25	07:23	08:22	08:22	08:53
	16:55	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:11	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		19:59	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
 Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survile@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 12 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (7)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 12 columns (January to December) and 31 rows (Day 1 to Day 31). Each cell contains a 3x3 matrix of times (Sun rise, Sun set, Potential sun hours) and a final row for 'Sum of minutes with flicker'.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 13 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (8)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:53	08:20	07:20	07:03	05:50	04:58	04:53	05:35	06:33	07:29	07:30	08:27
	16:10	17:04	18:02	20:03	21:02	21:54	22:10	21:32	20:23	19:06	16:53	16:06
2	08:53	08:19	07:18	07:00	05:48	04:57	04:54	05:37	06:35	07:31	07:32	08:29
	16:11	17:06	18:04	20:05	21:04	21:56	22:09	21:30	20:20	19:04	16:51	16:05
3	08:52	08:17	07:16	06:57	05:46	04:56	04:55	05:39	06:36	07:32	07:34	08:31
	16:13	17:08	18:06	20:07	21:05	21:57	22:09	21:29	20:18	19:01	16:49	16:04
4	08:52	08:15	07:13	06:55	05:44	04:55	04:56	05:41	06:38	07:34	07:36	08:32
	16:14	17:10	18:08	20:09	21:07	21:58	22:08	21:27	20:15	18:59	16:47	16:04
5	08:52	08:13	07:11	06:52	05:42	04:54	04:57	05:43	06:40	07:36	07:38	08:34
	16:15	17:12	18:10	20:11	21:09	21:59	22:08	21:25	20:13	18:56	16:45	16:03
6	08:51	08:11	07:08	06:50	05:40	04:54	04:58	05:44	06:42	07:38	07:40	08:35
	16:17	17:14	18:12	20:13	21:11	22:00	22:07	21:23	20:10	18:54	16:43	16:02
7	08:51	08:09	07:06	06:47	05:38	04:53	04:59	05:46	06:44	07:40	07:42	08:36
	16:18	17:16	18:14	20:15	21:13	22:01	22:06	21:21	20:08	18:51	16:41	16:02
8	08:50	08:07	07:03	06:45	05:36	04:52	05:00	05:48	06:46	07:42	07:44	08:38
	16:19	17:18	18:16	20:17	21:15	22:02	22:06	21:18	20:05	18:49	16:39	16:01
9	08:50	08:05	07:01	06:42	05:34	04:52	05:01	05:50	06:48	07:44	07:46	08:39
	16:21	17:20	18:18	20:19	21:17	22:03	22:05	21:16	20:03	18:46	16:37	16:01
10	08:49	08:03	06:58	06:40	05:32	04:51	05:02	05:52	06:49	07:46	07:48	08:40
	16:22	17:23	18:20	20:21	21:19	22:04	22:04	21:14	20:00	18:44	16:35	16:01
11	08:48	08:01	06:56	06:37	05:30	04:51	05:03	05:54	06:51	07:48	07:50	08:41
	16:24	17:25	18:22	20:23	21:20	22:05	22:03	21:12	19:58	18:41	16:34	16:00
12	08:47	07:59	06:53	06:35	05:28	04:50	05:04	05:55	06:53	07:50	07:52	08:43
	16:26	17:27	18:24	20:25	21:22	22:06	22:02	21:10	19:55	18:39	16:32	16:00
13	08:46	07:57	06:51	06:32	05:26	04:50	05:06	05:57	06:55	07:52	07:54	08:44
	16:27	17:29	18:26	20:27	21:24	22:07	22:01	21:08	19:53	18:37	16:30	16:00
14	08:46	07:55	06:48	06:30	05:24	04:49	05:07	05:59	06:57	07:54	07:56	08:45
	16:29	17:31	18:28	20:29	21:26	22:07	22:00	21:06	19:50	18:34	16:28	16:00
15	08:45	07:53	06:46	06:28	05:23	04:49	05:08	06:01	06:59	07:56	07:58	08:46
	16:31	17:33	18:30	20:31	21:28	22:08	21:59	21:03	19:47	18:32	16:27	16:00
16	08:44	07:50	06:43	06:25	05:21	04:49	05:10	06:03	07:01	07:58	08:00	08:47
	16:32	17:35	18:32	20:33	21:29	22:09	21:58	21:01	19:45	18:29	16:25	16:00
17	08:42	07:48	06:41	06:23	05:19	04:49	05:11	06:05	07:02	08:00	08:02	08:48
	16:34	17:37	18:34	20:34	21:31	22:09	21:56	20:59	19:42	18:27	16:23	16:00
18	08:41	07:46	06:38	06:20	05:17	04:49	05:13	06:07	07:04	08:02	08:04	08:48
	16:36	17:39	18:36	20:36	21:33	22:10	21:55	20:57	19:40	18:25	16:22	16:00
19	08:40	07:44	06:36	06:18	05:16	04:49	05:14	06:08	07:06	08:04	08:06	08:49
	16:38	17:41	18:38	20:38	21:35	22:10	21:54	20:54	19:37	18:22	16:20	16:01
20	08:39	07:41	06:33	06:16	05:14	04:49	05:16	06:10	07:08	08:06	08:08	08:50
	16:40	17:44	18:40	20:40	21:36	22:10	21:52	20:52	19:35	18:20	16:19	16:01
21	08:38	07:39	06:30	06:13	05:13	04:49	05:17	06:12	07:10	08:08	08:10	08:50
	16:42	17:46	18:42	20:42	21:38	22:11	21:51	20:50	19:32	18:17	16:17	16:01
22	08:36	07:37	06:28	06:11	05:11	04:49	05:19	06:14	07:12	08:10	08:12	08:51
	16:44	17:48	18:44	20:44	21:40	22:11	21:49	20:47	19:29	18:15	16:16	16:02
23	08:35	07:35	06:25	06:09	05:10	04:49	05:20	06:16	07:14	08:12	08:13	08:51
	16:46	17:50	18:46	20:46	21:41	22:11	21:48	20:45	19:27	18:13	16:15	16:02
24	08:33	07:32	06:23	06:06	05:08	04:50	05:22	06:18	07:15	08:14	08:15	08:52
	16:48	17:52	18:48	20:48	21:43	22:11	21:46	20:42	19:24	18:11	16:14	16:03
25	08:32	07:30	06:20	06:04	05:07	04:50	05:24	06:20	07:17	08:16	08:17	08:52
	16:49	17:54	18:50	20:50	21:44	22:11	21:45	20:40	19:22	18:08	16:12	16:04
26	08:30	07:28	06:18	06:02	05:05	04:50	05:25	06:22	07:19	08:18	08:19	08:53
	16:51	17:56	18:52	20:52	21:46	22:11	21:43	20:38	19:19	18:06	16:11	16:04
27	08:29	07:25	06:15	05:59	05:04	04:51	05:27	06:23	07:21	08:20	08:21	08:53
	16:53	17:58	18:54	20:54	21:47	22:11	21:41	20:35	19:17	18:04	16:10	16:05
28	08:27	07:23	06:13	05:57	05:03	04:51	05:29	06:25	07:23	08:22	08:22	08:53
	16:56	18:00	18:56	20:56	21:49	22:11	21:40	20:33	19:14	18:02	16:09	16:06
29	08:26		07:10	05:55	05:01	04:52	05:30	06:27	07:25	08:24	08:24	08:53
	16:58		19:58	20:58	21:50	22:10	21:38	20:30	19:12	18:00	16:08	16:07
30	08:24		07:08	05:53	05:00	04:53	05:32	06:29	07:27	08:26	08:26	08:53
	17:00		20:00	21:00	21:52	22:10	21:36	20:28	19:09	18:00	16:07	16:08
31	08:22		07:05		04:59		05:34	06:31		07:28		08:53
	17:02		20:01		21:53		21:34	20:25		16:55		16:09
Potential sun hours	244	270	366	422	499	517	519	464	383	327	254	226
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

Licensed user:

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 14 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (9)
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) [KAUNAS]
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with 13 columns (months) and 31 rows (days). Each cell contains a 2x2 matrix of times (Sun rise, Sun set, First time with flicker, Last time with flicker) and a 'Sum of minutes with flicker' value at the bottom of each row.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 15 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (10)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' row at the bottom.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 16 - NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (11)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' row at the bottom.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 17 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)
Sunshine probability S (Average daily sunshine hours) [KAUNAS]

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains a 2x2 grid of times (Sun rise/set and First/Last time with flicker) and a 'Sum of minutes with flicker' at the bottom.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Project:

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Calendar per WTG

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 18 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
1,41 2,36 4,03 5,55 8,35 8,36 8,16 7,72 5,06 3,23 1,33 0,98

Operational time
0 1 Sum
4.380 4.380 8.760

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains sun rise and set times and operational status (0 or 1). Summary rows at the bottom show potential sun hours and minutes with flicker for each month.

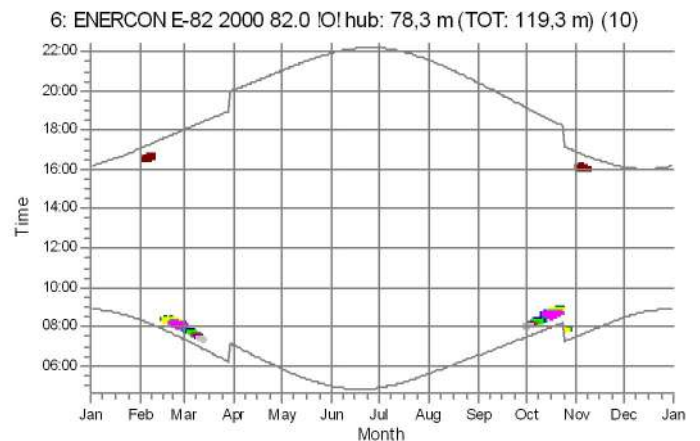
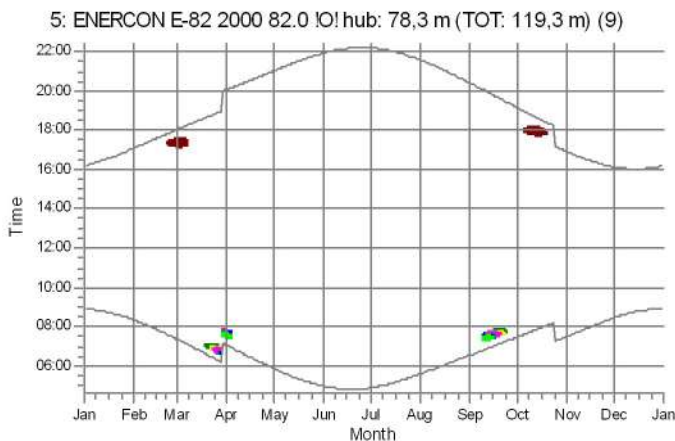
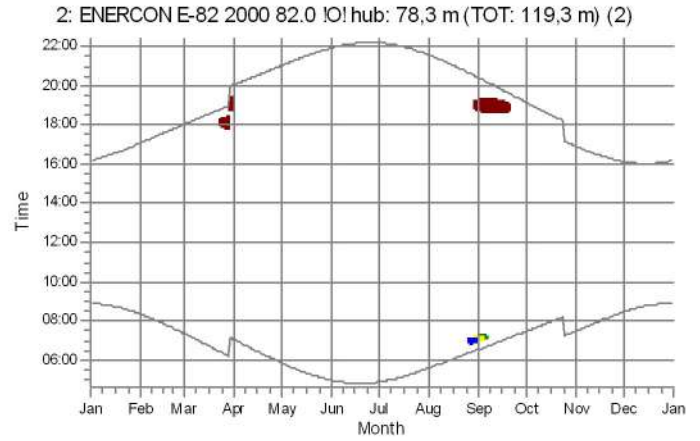
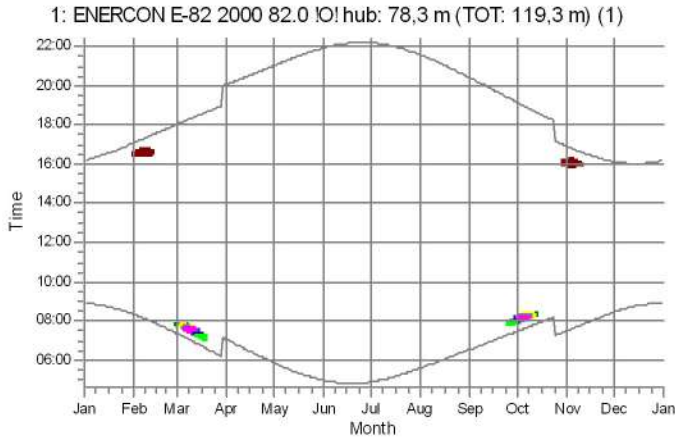
Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker



SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E82 Shut down



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)*
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)*
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)*
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)
- F: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (6)

- G: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (7)
- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)*
- I: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (9)
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

* Results reduced by flicker curtailment

Project:

6 VE Jurbudpiø ir Bridpiø k., ðakiø raj.

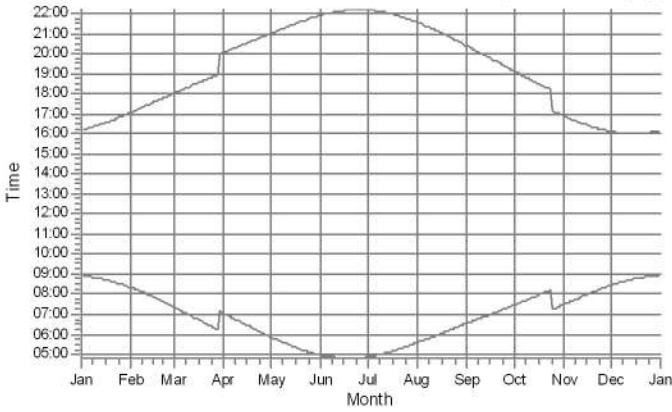
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Calculated:
2021.06.16 15:41/3.4.415

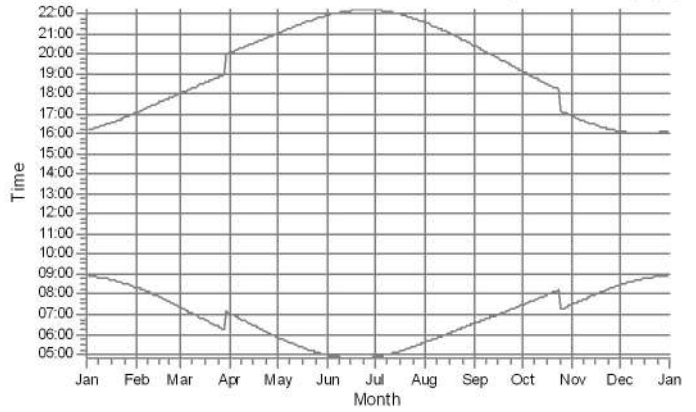
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E82 Shut down

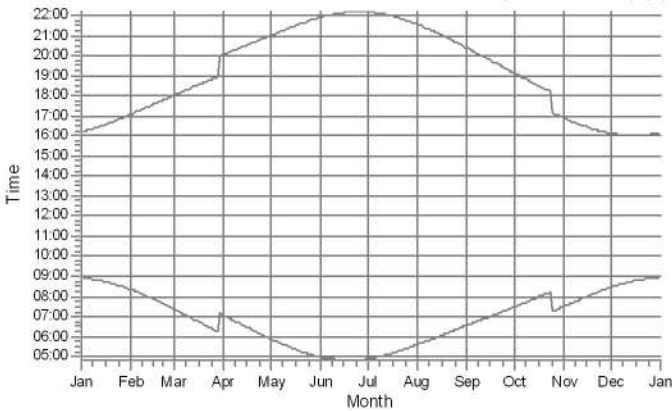
7: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)



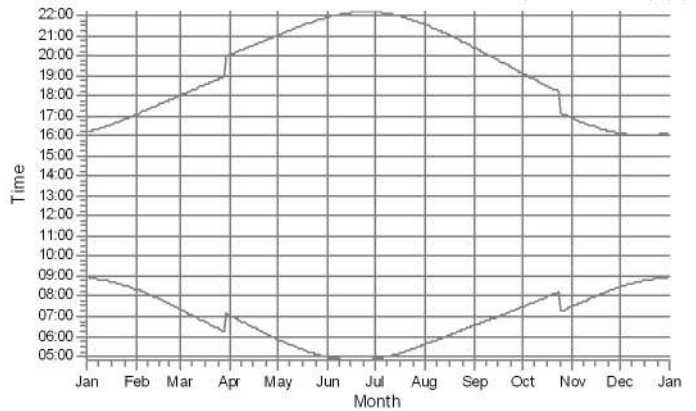
8: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)



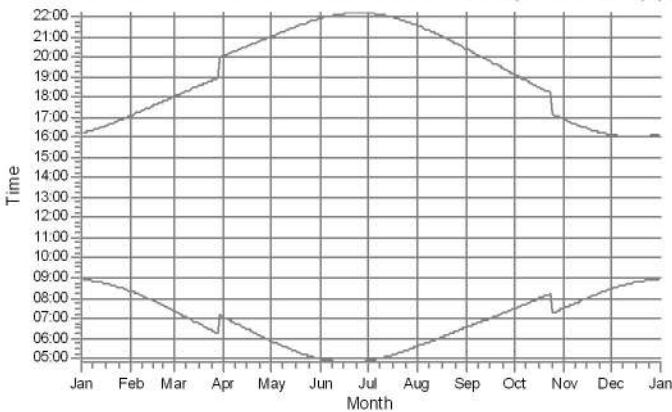
9: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)



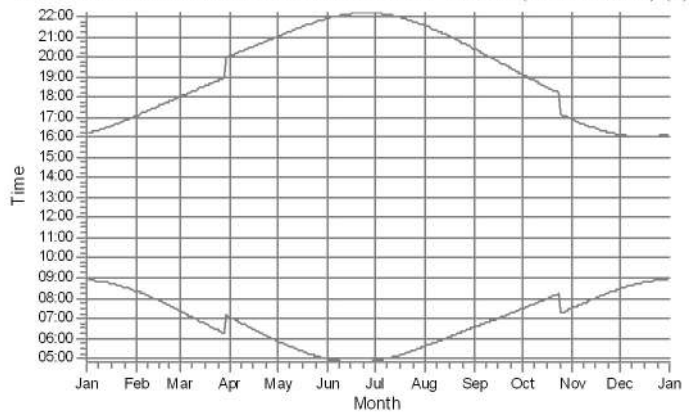
10: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)



11: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)



12: NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)



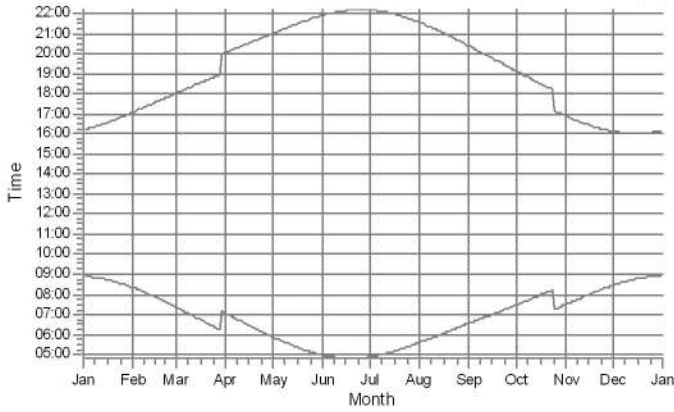
Shadow receptors

* Results reduced by flicker curtailment

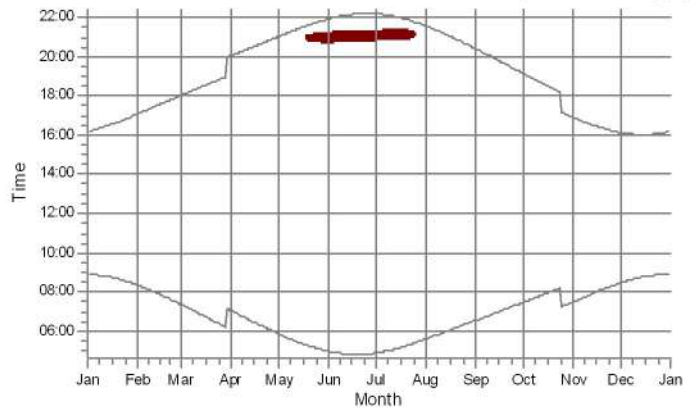
SHADOW - Calendar per WTG, graphical

Calculation: Suminis poveikis Enercon E82 Shut down

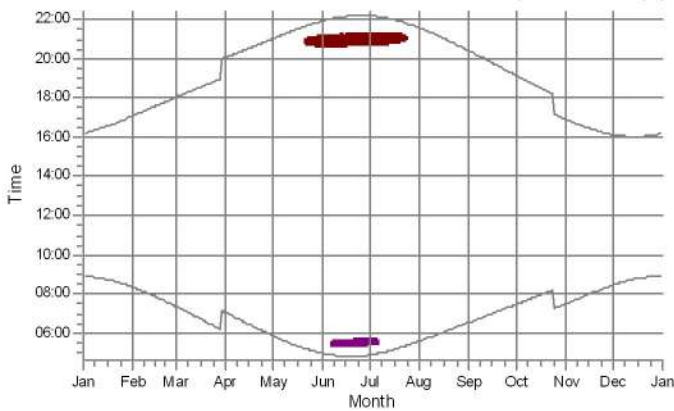
13: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (8)



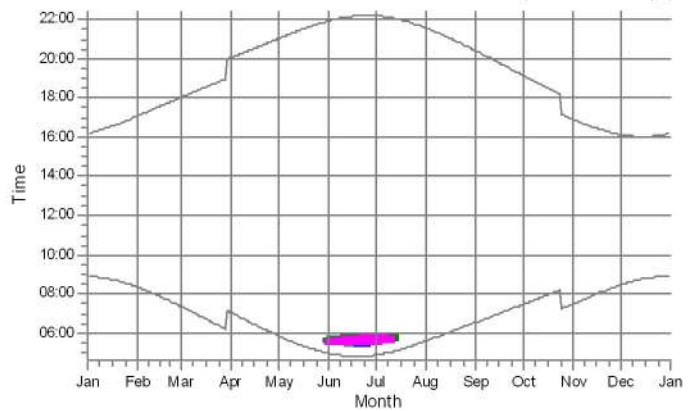
14: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (9)



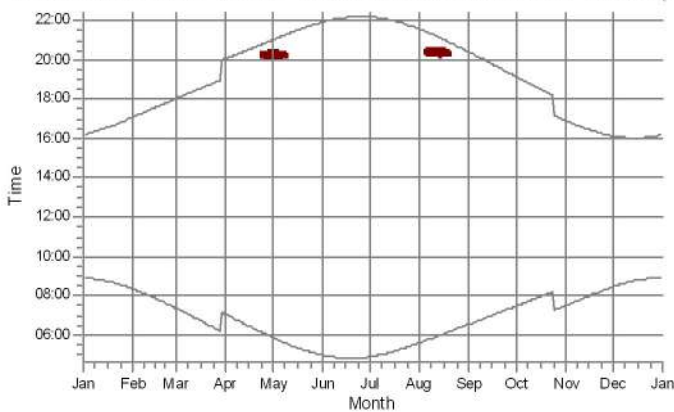
15: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (10)



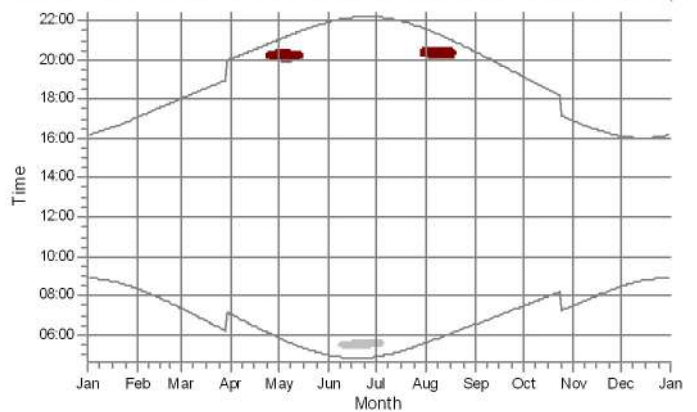
16: NORDEX N149/4.0-4.5 4500 149.0 IO! hub: 165,0 m (TOT: 239,5 m) (11)



17: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



18: GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 IO! hub: 161,0 m (T



Shadow receptors

- A: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (1)*
- B: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (2)*
- C: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (3)*
- D: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (4)
- E: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (5)

- H: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (8)*
- J: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (10)
- K: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (13)
- L: Shadow Receptor: 1,0 × 1,0 Azimuth: 0,0° Slope: 90,0° (14)

* Results reduced by flicker curtailment

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 1 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (1)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
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27												
28												
29												
30												
31												

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:
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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 2 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (2)

Flicker curtailment according to specified plan

	January	February	March	April	May	June	July	August	September	October	November	December
1				18:47-19:22								
2				18:46-19:22								
3				18:46-19:22								
4				18:46-19:21								
5				18:46-19:21								
6				18:46-19:20								
7				18:46-19:19 07:12-07:15								
8				18:46-19:18 07:09-07:14								
9				18:47-19:17 07:07-07:14								
10				18:48-19:15 07:04-07:13								
11				18:49-19:14 07:02-07:12								
12				18:50-19:12 07:00-07:09								
13				18:52-19:10 06:57-07:07								
14				18:56-19:07 06:55-07:06								
15				06:52-07:01								
16				06:51-07:00								
17				06:53-06:58								
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 3 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (7)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
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25												
26												
27												
28												
29												
30												
31												

Project:

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Calculated:

2021.06.16 15:41/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 4 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (8)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

	January	February	March	April	May	June	July	August	September	October	November	December
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
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19												
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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

Licensed user:

Infraplanas
K. Donelaicio str. 55-2
LT-44245 Kaunas
+370 37 407548
Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 5 - ENERCON E-82 2000 82.0 IO! hub: 78,3 m (TOT: 119,3 m) (9)

Flicker curtailment according to specified plan

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Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 6 - ENERCON E-82 2000 82.0 !O! hub: 78,3 m (TOT: 119,3 m) (10)

Flicker curtailment according to specified plan

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Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 7 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (2)

Flicker curtailment according to specified plan

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Project:

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 8 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (3)

Flicker curtailment according to specified plan

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Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 9 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (4)

Flicker curtailment according to specified plan

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Project:

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Calculated:

2021.06.16 15:41/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 10 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (5)

Flicker curtailment according to specified plan

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Project:

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Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 11 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (6)

Flicker curtailment according to specified plan

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Project:

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Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 12 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (7)

Flicker curtailment according to specified plan

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Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 13 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (8)

Flicker curtailment according to specified plan

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Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 14 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (9)

Flicker curtailment according to specified plan

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Project:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 15 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (10)

Flicker curtailment according to specified plan

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Project:

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Calculated:

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SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 16 - NORDEX N149/4.0-4.5 4500 149.0 !O! hub: 165,0 m (TOT: 239,5 m) (11)

Flicker curtailment according to specified plan

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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Raminta Survilè / r.surville@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 17 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (12)

Flicker curtailment according to specified plan

January February March April May June July August September October November December

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Project:

6 VE Jurbudpiø ir Bridpiø k., Ðakiø raj.

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Raminta Survilè / r.survilè@infraplanas.lt
Calculated:
2021.06.16 15:41/3.4.415

SHADOW - Flicker curtailment calendar

Calculation: Suminis poveikis Enercon E82 Shut downWTG: 18 - GE WIND ENERGY 5.3-158 Thrust 700 5300 158.0 !O! hub: 161,0 m (TOT: 240,0 m) (13)

Flicker curtailment according to specified plan

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Project:

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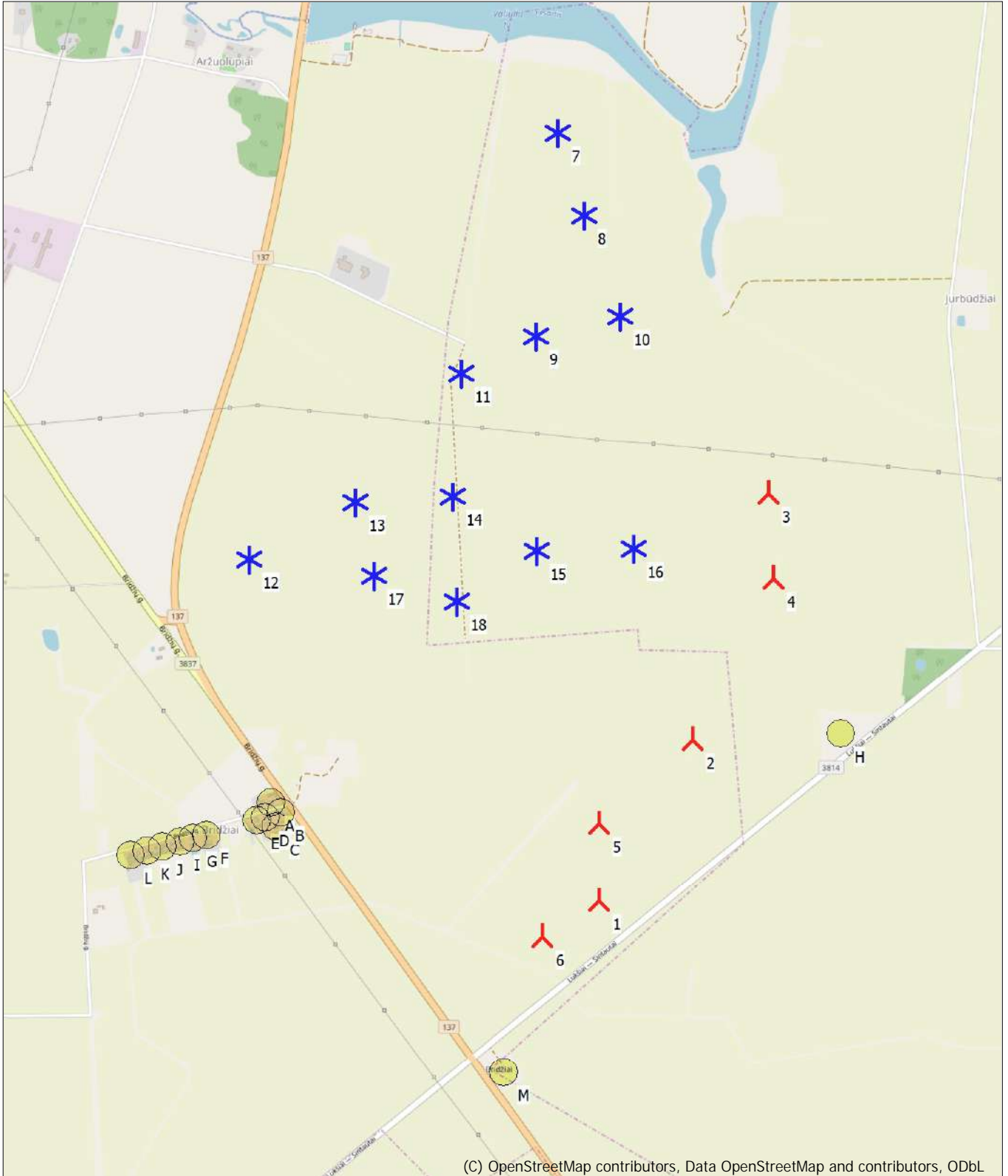
Raminta Survilø / r.survile@infraplanas.lt

Calculated:

2021.06.16 15:41/3.4.415

SHADOW - Map

Calculation: Suminis poveikis Enercon E82 Shut down



0 250 500 750 1000m

Map: EMD OpenStreetMap, Print scale 1:20.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 441.861 North: 6.088.422

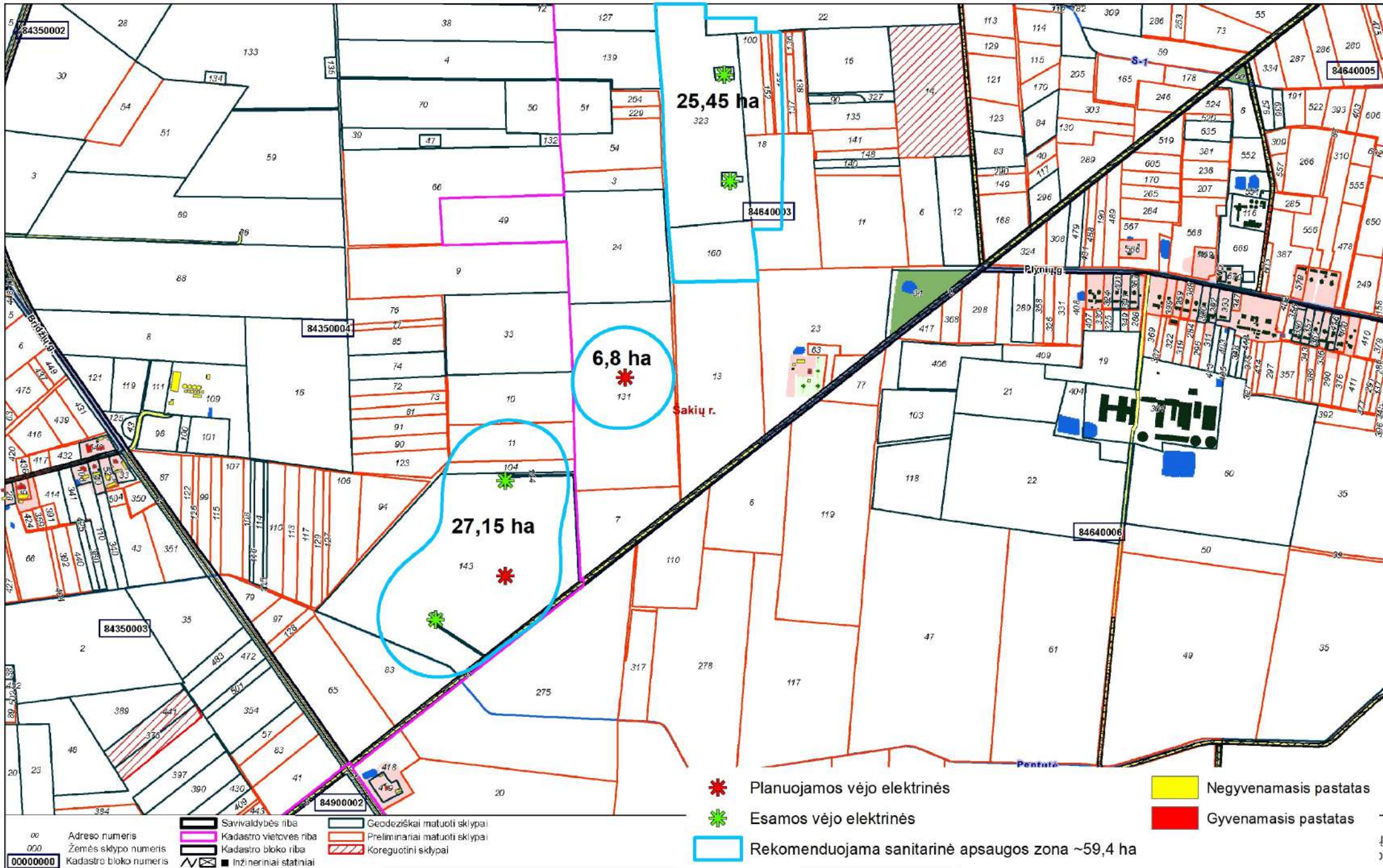
New WTG Existing WTG Shadow receptor

Flicker map level: Height Contours: CONTOURLINE_ONLINEDATA_0.wpo (1)

10 PRIEDAS. Rekomenduojama sanitarinė apsaugos zona

KADASTRO ŽEMĖLAPIO IŠTRAUKA

Mastelis 1:10000



- ✳ Planuojamos vėjo elektrinės
- ✳ Esamos vėjo elektrinės
- Rekomenduojama sanitarinė apsaugos zona ~59,4 ha
- Negyvenamasis pastatas
- Gyvenamasis pastatas

∞ Adreso numeris
 000 Žemės sklypo numeris
 00000000 Kadastro bloko numeris

— Savivaldybės riba
 Kadastro vietovės riba
 Kadastro bloko riba

— Geodeziškai matuoti sklypai
 Preliminariai matuoti sklypai
 Koreguotini sklypai

▣ Inžineriniai statiniai