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memorandum

To: Henry Woltag
ConnectGen LLC

EDR Project No: 19255

From: Jacob Runner

Date: February 7, 2020

Reference: Fountain Wind Farm
Shadow Flicker Analysis

Comments:

Introduction

This memorandum report presents the findings of a shadow flicker analysis for the proposed Fountain Wind Farm (the Project) proposed by ConnectGen LLC (Client) in Shasta County, California. The layout evaluated in this analysis includes 67 Vestas V162 wind turbines on a 125-meter tower. The shadow flicker impact was evaluated at 58 receptors within 10 rotor diameters (1,620 meters) of the proposed wind turbines.

Shadow flicker refers to the shadows that a wind turbine casts over structures and observers at times of the day when the sun is directly behind the turbine rotor from an observer's position. During intervals of sunshine, operating wind turbine generators will cast a shadow on surrounding areas as the rotor blades pass in front of the sun, causing a flickering effect while the rotor is in motion. Shadow flicker is most pronounced in northern latitudes during winter months because of the lower angle of the sun in the winter sky. However, it is possible to encounter shadow flicker anywhere for brief periods after sunrise and before sunset (U.S. Department of the Interior, 2005). Shadow flicker does not occur when fog or clouds obscure the sun, or when turbines are not operating.

The distance between a wind turbine and a potential shadow-flicker receptor affects the intensity of the shadows cast by the blades, and therefore the intensity of flickering. Shadows cast close to a turbine will be more intense, distinct, and focused. This is because a greater proportion of the sun's disc is intermittently blocked by the turbine (BERR, 2009). Obstacles such as terrain, vegetation, and/or buildings occurring between residences and wind turbines can significantly reduce or eliminate shadow flicker effects. At distances beyond roughly 10 rotor diameters (approximately 1,620 meters based on the largest turbine model proposed for the Project [V162]) shadow flicker effects are generally considered negligible (BERR, 2009; DECC, 2011; DOER, 2011). For this reason, the shadow flicker analysis was run with a study area of 10 rotor diameters (1,620 meters).

The location and duration of shadow flicker can be predicted quite accurately using computer modeling programs and input data regarding turbine locations, turbine dimensions, receptor locations, local topography, and sunshine frequency. A conservative assumption that the turbines are in continuous operation is also applied. Shadow flicker effects predicted by the modeling exercise are expressed in terms of frequency (hours per year) at each receptor location.

Methods

This shadow flicker analysis evaluated the potential impact of 67 Vestas V162 turbines, each with a rotor diameter of 162 meters and a hub height of 125 meters (Figure 1).

WindPRO 3.2 software and the associated Shadow module was used to conduct the shadow flicker analysis. This software is a widely accepted modeling software package developed specifically for the design and evaluation of wind power projects. Input variables and assumptions used for shadow flicker modeling calculations for the proposed Project include:

- The latitude and longitude coordinates of 67 proposed wind turbine sites (provided by the Applicant).
- The latitude and longitude coordinates for 58 potential receptors located within the 10-rotor diameter Study Area (provided by the Applicant).
- USGS 1:24,000 topographic mapping and USGS digital elevation model (DEM) data.
- The rotor diameter (162 meters) and hub height (125 meters) for the V162 turbine.
- Annual wind rose data (provided by the Applicant) to determine the approximate directional frequency of rotor orientation throughout the year (Table A1 of Attachment A).
- To account for the occurrence of cloudy conditions, the average monthly percent of available sunshine for the nearest National Oceanic and Atmospheric Administration (NOAA) weather station in Sacramento, California was used (Table A2 of Attachment A). Data were obtained from NOAA's "Comparative Climatic Data for the United States through 2015" (<http://www.ncdc.noaa.gov>).
- No allowance was made for wind being below or above generation speeds. Blades are assumed to be moving during all daylight hours when the sun's elevation is more than 3 degrees above the horizon. Shadow flicker is generally considered imperceptible when the sun is less than 3 degrees above the horizon due to the scattering effect of the atmosphere on low angle sunlight (DECC, 2011).
- The possible screening effect of trees and buildings adjacent to the receptors was not taken into consideration in the modeling. In addition, the number and/or orientation of windows in residential receptors were not considered in the analysis.

Based on these variables and assumptions, *WindPRO* was used to calculate the theoretical number of hours per year that shadow flicker would occur at any given location in the vicinity of the Project.

No consistent national, state, county, or local standards exist for allowable frequency or duration of shadow flicker from wind turbines at the proposed Project site. The National Association of Regulatory Utility Commissioners (NARUC) recommends a threshold of 30 hours of shadow flicker per year at occupied buildings (NARUC, 2012). Accordingly, a threshold of 30 hours of shadow flicker per year was applied to this Project.

The model calculations include the cumulative sum of shadow hours for all turbines. This omni-directional approach reports total shadow flicker results at a receptor regardless of the presence or orientation of windows at the receptor (i.e., it assumes shadows from all directions can be perceived at a receptor, which may or may not be true). A receptor in the model is defined as a one square meter area, one meter above ground level; the actual dimensions of the receptor or window locations are not taken into consideration.

Results

Output from the model includes the following information:

- Calculated shadow flicker time (specific days, maximum hours per day, and total hours per year when shadow flicker is expected) at each of the receptors located in the Study Area.
- Tabulated and plotted time of day that receptors are predicted to receive shadow flicker (Attachment B).
- Shadow isolines, which are used to create maps showing turbine locations, receptors, and projected shadow flicker duration (hours per year) without taking into consideration the effect of screening provided by vegetation and structures (Figure 2).

A summary of the projected shadow flicker at each of the 58 receptors in the Study Area is presented below:

- 1 (2%) of the receptors may be affected 0-1 hour/year,
- 10 (17%) of the receptors may be affected 1-10 hours/year,
- 14 (24%) of the receptors may be affected 10-20 hours/year,
- 15 (26%) of the receptors may be affected 20-30 hours/year,
- 18 (31%) of the receptors may be affected for more than 30 hours/year.

As these results indicate, 69% of the receptors are predicted to receive less than 30 hours of shadow flicker per year, with 43% of the receptors predicted to receive less than 10 hours of shadow flicker per year. At most receptor locations, shadow flicker will occur primarily in the early morning or late afternoon and will generally last less than 1 hour per day. The maximum daily duration of shadow flicker is 1 hour and 19 minutes (at receptor 57, see Attachment B).

Table 1 provides the results of the predicted shadow flicker at each receptor calculated to experience more than 30 hours of shadow flicker per year. The times of day and duration of shadow flicker experienced by each receptor will vary throughout the calendar year based on the position of the sun in the sky and the direction of prevailing winds. See Attachment B for detailed calendars that illustrate the specific times of year and day that shadow flicker may occur at all receptors.

Table 1. Summary of Shadow Flicker Results at Receptors Predicted to Exceed 30 Hours

Receptor ID	Predicted Annual Shadow Flicker (hh:mm)	Predicted Max Daily Shadow Flicker (hh:mm)	Predicted Shadow Flicker (days/year)
46	30:21	0:45	104
51	30:38	0:35	158
12	30:56	0:36	152
15	31:15	0:39	140
11	32:06	0:37	154
47	32:28	0:44	133
48	32:59	0:47	109
52	33:06	0:36	169
3	33:11	0:42	149

Receptor ID	Predicted Annual Shadow Flicker (hh:mm)	Predicted Max Daily Shadow Flicker (hh:mm)	Predicted Shadow Flicker (days/year)
50	34:33	0:43	153
5	35:13	0:39	159
1	35:37	0:37	165
49	36:21	0:49	112
7	37:31	0:39	178
6	40:52	0:41	186
2	50:11	1:14	119
58	51:35	0:57	229
57	57:25	1:19	116

Details regarding shadow flicker effects predicted at the 18 receptors predicted to receive over 30 hours of shadow flicker are presented in Table 2 below and in Attachment B.

Table 2. Daily Effect to Receptors Predicted to Exceed 30 Hours of Shadow Flicker

Receptor ID	Predicted Annual Shadow Flicker (hh:mm)	Turbines Contributing to Shadow Flicker	Approximate Times of Day Receptor Potentially Affected by Flicker ¹
46	30:21	D02, D03	5:00 PM – 7:30 PM
51	30:38	D02, D03, D04,	3:30 PM – 5:00 PM 6:00 PM – 8:00 PM
12	30:56	D02, D03, D04	3:30 PM – 5:00 PM 6:30 PM – 8:00 PM
15	31:15	D02, D03, D04	3:30 PM – 4:30 PM 6:00 PM – 7:30 PM
11	32:06	D02, D03, D04	3:30 PM – 5:00 PM 6:30 PM – 8:00 PM
47	32:28	D02, D03, D04	3:30 PM – 4:00 PM 5:30 PM – 8:00 PM
48	32:59	D02, D03	5:00 PM – 7:30 PM
52	33:06	D02, D03, D04	3:30 PM – 5:00 PM 6:00 PM – 8:00 PM
3	33:11	D02, D03, D04	3:30 PM – 5:00 PM 6:30 PM – 8:30 PM
50	34:33	D02, D03, D04	3:30 PM – 5:00 PM
5	35:13	D02, D03, D04	3:30 PM – 5:00 PM 6:30 PM – 8:00 PM
1	35:37	K04, K05, L04	6:30 AM – 8:00 AM 8:30 AM – 9:30 AM
49	36:21	D02, D03	4:30 PM – 7:30 PM

Receptor ID	Predicted Annual Shadow Flicker (hh:mm)	Turbines Contributing to Shadow Flicker	Approximate Times of Day Receptor Potentially Affected by Flicker ¹
7	37:31	D02, D03, D04	3:30 PM – 5:00 PM 6:30 PM – 8:00 PM
6	40:52	D02, D03, D04	3:30 PM – 5:00 PM 6:30 PM – 8:00 PM
2	50:11	D04, D05	6:30 PM – 8:30 PM
58	51:35	M08, M10, N02, N05	6:30 AM – 7:30 AM 8:00 AM – 9:00 AM 4:00 PM – 6:00 PM 7:00 PM – 8:30 PM
57	57:25	D04, D05	6:30 PM – 8:30 PM

¹The times of day represent the range of times during which each receptor could potentially experience shadow flicker throughout the year; however, no receptors will experience shadow flicker every day during all of these hours. See Attachment B for detailed calendars that illustrate the specific time of year and day that each receptor may experience shadow flicker.

Phase II Shadow Flicker Analysis

To more accurately calculate the amount of shadow flicker modeled to occur at non-participating receptors over 30-hours a supplemental (Phase II) analysis was conducted. This analysis utilized desktop review to identify obstacles that could fully or partially block shadows at receptor sites. These data were then incorporated into the WindPro model and the analysis of predicted shadow flicker impacts at this receptor was evaluated.

The following steps were undertaken as part of this Phase II Analysis:

1. Orthographic images were imported into the WindPro model (all images are geo-referenced).
2. Using digitizing tools in WindPro, geometric objects were drawn to represent different types of obstacles. Each object was assigned a width, length, and height to reflect the dimensions of the obstacle, as documented through client correspondence and orthographic images.
3. Porosity is then assigned to each obstacle. Low porosity factors (0, 0.2, etc.) were assigned to dense obstacles (such as buildings or stands of conifers) while higher porosity factors (0.5, 0.6, etc.) were assigned to obstacles with less density (such as widely spaced deciduous trees), see Table 3.

Table 3. Shadow Hours and Summary of Identified Obstacles at Non-Participating Receptors Predicted to Exceed 30 Hours

Receptor ID	Obstacle Types	Obstacle Location Relative to Receptor	Approximate Obstacle Dimensions (meters)	Assigned Porosity Factor
46	Stand of Mixed Trees	NW	12 x 19 x 7	0.3
51	Large Stand of Mixed Trees	W	12 x 44 x 50	0.3
12	Large Stand of Mixed Trees	W	12 x 67 x 45	0.3
15	Large Stand of Mixed Trees	W	12 x 43 x 71	0.3
11	Large Stand of Mixed Trees	NNW	12 x 67 x 45	0.3
	Large Stand of Mixed Trees	WSW	12 x 35 x 22	0.3

Receptor ID	Obstacle Types	Obstacle Location Relative to Receptor	Approximate Obstacle Dimensions (meters)	Assigned Porosity Factor
47	Large Stand of Mixed Trees	W	12 x 36 x 51	0.3
48	Large Stand of Mixed Trees	WNW	12 x 21 x 21	0.3
52	Large Stand of Mixed Trees	W	12 x 67 x 45	0.3
3	Large Stand of Mixed Trees	W	12 x 30 x 41	0.3
	Large Stand of Mixed Trees	WSW	12 x 20 x 74	0.3
50	Large Stand of Mixed Trees	W	12 x 30 x 41	0.3
	Large Stand of Mixed Trees	WSW	12 x 20 x 74	0.3
5	Large Stand of Mixed Trees	NNE	12 x 35 x 22	0.3
	Large Stand of Mixed Trees	W	12 x 20 x 14	0.3
	Stand of Evergreen Trees	WNW	12 x 36 x 71	0.2
1	Large Stand of Mixed Trees	NW	12 x 60 x 146	0.3
	Large Stand of Mixed Trees	NNE	12 x 128 x 247	0.3
49	Large Stand of Mixed Trees	NW	12 x 19 x 7	0.3
7	Stand of Evergreen Trees	W	12 x 36 x 71	0.2
	Large Stand of Mixed Trees	SE	12 x 20 x 14	0.3
6	Large Stand of Mixed Trees	NW	12 x 36 x 71	0.2
	Large Stand of Mixed Trees	W	12 x 41 x 18	0.3
2	Deciduous Tree	W	12 x 8 x 7	0.4
	Open Hedge	N	8 x 30 x 5	0.7
57	Large Stand of Mixed Trees	NW	12 x 24 x 11	0.3

The results of the Phase II Analysis are outlined below in Table 3 and presented in their entirety in Attachment C. As indicated, obstacles have reduced shadow flicker below the 30-hour threshold for 16 of the 17 receptors. Figure 3 provides shadow isolines and aerial imagery of the receptor and the existing obstacles (trees and/or structures) factored into the Phase II Analysis at these sites.

Table 4. Summary of Phase II Shadow Flicker at Receptor Predicted to Exceed 30 Hours

Receptor ID	Phase II Predicted Shadow Flicker (days/year)	Phase II Predicted Annual Shadow Flicker (hh:mm/year)	Phase II Predicted Max Daily Shadow Flicker (hh:mm/day)
46	0	00:00	00:00
51	0	00:00	00:00
12	0	00:00	00:00
15	0	00:00	00:00

Receptor ID	Phase II Predicted Shadow Flicker (days/year)	Phase II Predicted Annual Shadow Flicker (hh:mm/year)	Phase II Predicted Max Daily Shadow Flicker (hh:mm/day)
11	0	00:00	00:00
47	30	3:17	0:19
48	0	00:00	00:00
52	0	00:00	00:00
3	99	0:42	23:17
50	101	24:16	0:43
5	62	9:45	0:27
1	52	3:52	0:30
49	0	00:00	00:00
7	0	00:00	00:00
6	0	00:00	00:00
2	119	50:11	1:14
57	0	00:00	00:00

Conclusion

In summary, as a result of modeling the proposed Vestas V162 turbine model, *WindPRO* predicted that 18 receptors will receive more than 30 hours of shadow flicker per year. To evaluate any screening by existing yard trees, buildings, or proximity to stands of trees a Phase II analysis was completed for non-participating receptors over the 30 hours of flicker per year threshold. The Phase II analysis indicated that 16 of the 17 non-participating receptors were modeled to have under the 30 hours of shadow flicker per year threshold.

Depending on the final turbine layout and model selected, there may be no non-participating receptors that are predicted to receive more than 30 hours/year of shadow flicker, the proposed threshold for which mitigation will be performed as discussed below. Therefore, following final turbine model selection the Applicant will prepare an updated receptor-specific shadow flicker analysis for non-participating residences. This analysis will take into account any screening by existing yard trees, buildings, or proximity to stands of trees and the number and/or orientation of windows in residential receptors. Additionally, this analysis will also use project specific met data to account for wind being below or above generation speeds.

Many of the modeled shadow flicker hours are expected to be of low intensity, as they will occur during the early morning or late afternoon hours when the sun is low in the sky. When the sun sinks low on the horizon, more of its light is scattered by the atmosphere, which has the effect of dampening its brightness and therefore reducing its ability to cast dark shadows. Following the final shadow flicker analysis for non-participating residences, if shadow flicker is modeled to exceed 30 hours per year at a non-participating residence, the following mitigation options are available: 1) work with the landowner to become a Project participant, 2) planting of trees or installation of window blinds to block the shadow flicker, or 2) operational curtailment of turbines so that the 30 hour per year threshold is not exceeded. These mitigation options can be easily implemented even after the Facility has been constructed.

References

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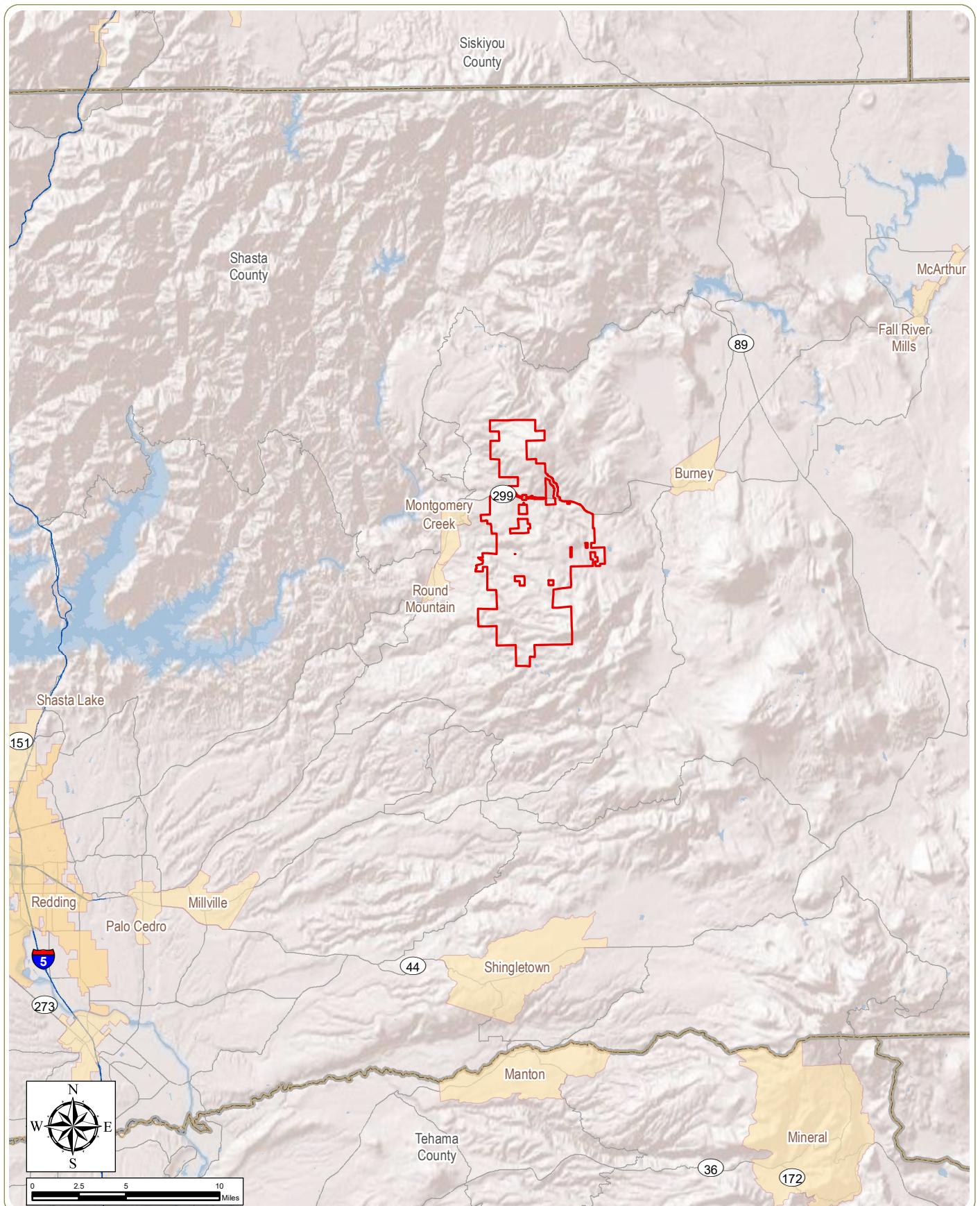
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Figures



Fountain Wind Farm

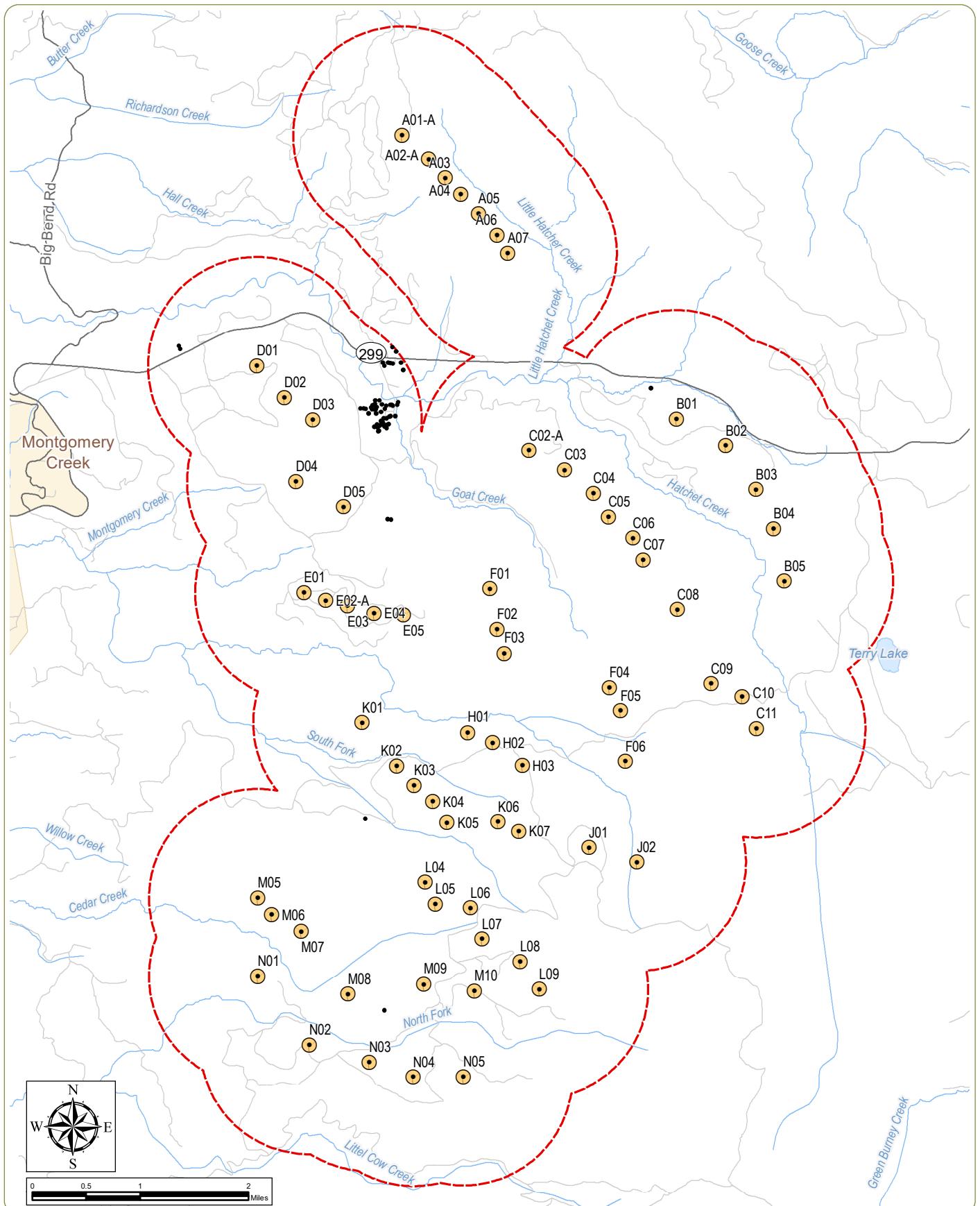
Shasta County, California

Figure 1. Regional Project Location

Project Area

Notes: 1. Basemap: ESRI ArcGIS Online "World Shaded Relief" Map Service and ESRI StreetMap North America, 2008. 2. This map was generated in ArcMap on February 6, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.







Notes: 1. Basemap: ESRI StreetMap North America, 2008. 2. This map was generated in ArcMap on February 7, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.



Fountain Wind Farm

Shasta County, California

**Figure 4. Phase II Analysis Projected Shadow Flicker
Sheet 1 of 2**

Notes: 1. Basemap: ESRI StreetMap North America, 2008. 2. This map was generated in ArcMap on February 7, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

○ Non-Participating Receptor Analyzed Shadow Isolines Shadow Flicker (hours/year)

● Wind Turbine

□ 1620-meter Study Area

— 0 hours/year

— 10 hours/year

— 20 hours/year

— 30 hours/year

— 100 hours/year

< 1

1 - 10

10 - 20

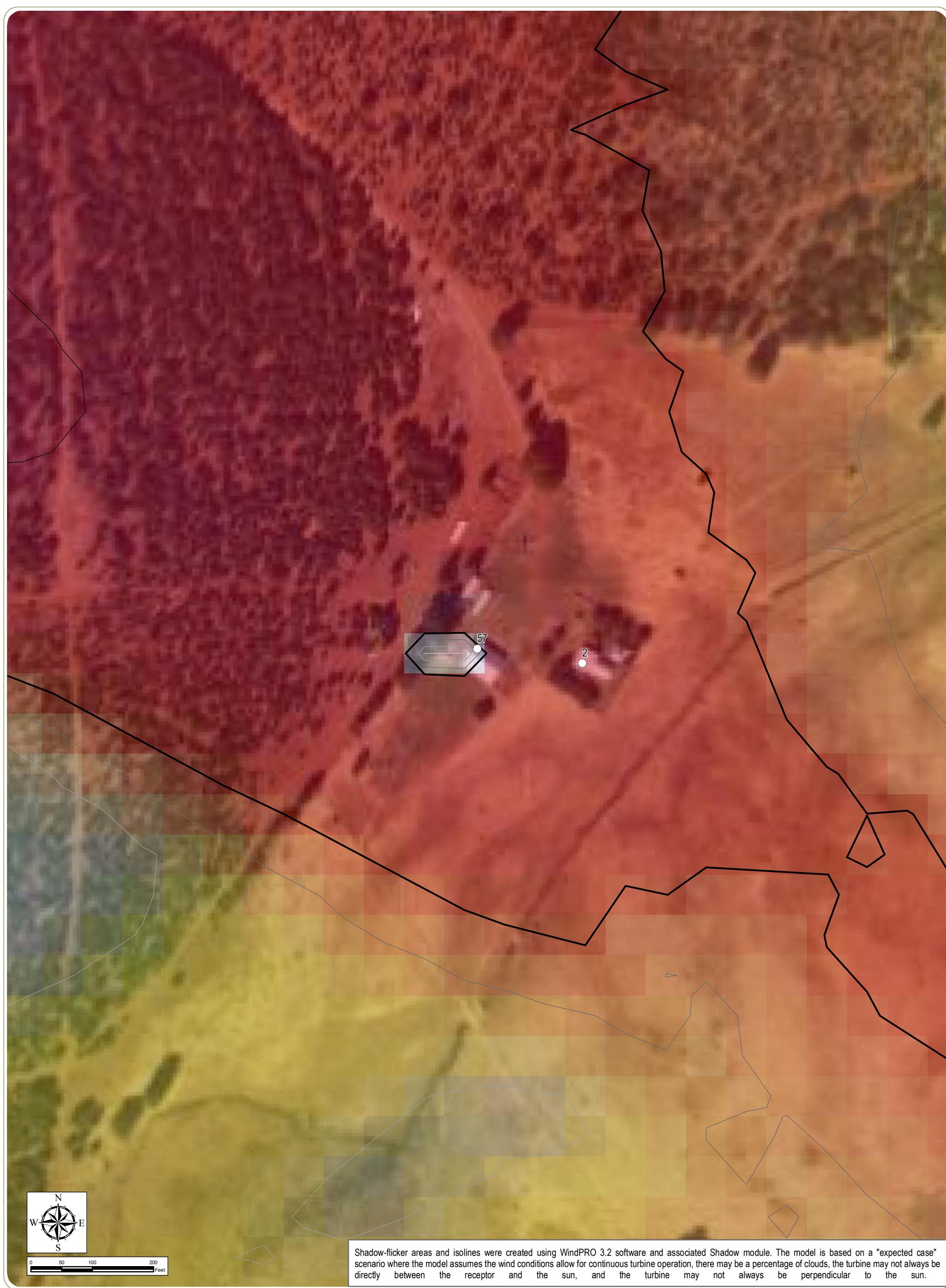
20 - 30

30 - 100

> 100



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Fountain Wind Farm
Shasta County, California

**Figure 4. Phase II Analysis Projected Shadow Flicker
Sheet 2 of 2**

Notes: 1. Basemap: ESRI StreetMap North America, 2008. 2. This map was generated in ArcMap on February 7, 2020. 3. This is a color graphic. Reproduction in grayscale may misrepresent the data.

- Non-Participating Receptor Analyzed
- Wind Turbine
- 1620-meter Study Area

Shadow Isolines
0 hours/year
10 hours/year
20 hours/year
30 hours/year
100 hours/year

Shadow Flicker (hours/year)
< 1
1 - 10
10 - 20
20 - 30
30 - 100
> 100

Attachment A
Wind Rose and Sunshine Data

Table A1. Wind Rose Data

SECTOR	N	NNE	NE	ENE	E	ESE	SE	SSE
Frequency	0.26	0.74	3.65	22.10	20.89	1.36	0.06	0.27
Hours of Operation	23	65	319	1,935	1,830	119	5	24

SECTOR	S	SSW	SW	WSW	W	WNW	NW	NNW
Frequency	3.88	16.34	20.16	8.68	1.13	0.22	0.12	0.15
Hours of Operation	340	1,432	1,766	761	99	19	10	13

Source: Wind rose data provided by ConnectGen LLC.

Table A2. Sunshine Probability Data¹

Month	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Sunshine Probability ²	0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

¹Source: NOAA Comparative Climatic Data for the United States through 2015 – Sacramento, California Weather Station.

²Defined by NOAA as the total time that sunshine reaches the surface of the earth, expressed as the percentage of the maximum amount possible from sunrise to sunset with clear sky conditions.

Attachment B
WindPRO Results and Calendar

SHADOW - Main Result

Assumptions for shadow calculations

Maximum distance for influence	1,620 m
Minimum sun height over horizon for influence	3 °
Day step for calculation	1 days
Time step for calculation	1 minutes

Sunshine probability S/S0 (Sun hours/Possible sun hours) []											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761
W	WNW	NW	NNW	Sum							
99	19	10	13	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: 5m_contour.wpo (2)

Obstacles not used in calculation

Eye height for map: 1.5 m

Grid resolution: 1.0 m

All coordinates are in

UTM (north)-NAD83 (US+CA) Zone: 10

WTGs

Easting	Northing	Z	Row data/Description	WTG type							
				Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM	
[m]											
A01-A	597,298	4,527,818	1,490.5 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
A02-A	597,698	4,527,462	1,505.7 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
A03	597,940	4,527,185	1,490.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
A04	598,170	4,526,938	1,500.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (1) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
A05	598,436	4,526,649	1,484.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (2) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
A06	598,713	4,526,330	1,457.7 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (3) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
A07	598,874	4,526,064	1,439.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (4) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
B01	601,380	4,523,596	1,279.7 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
B02	602,115	4,523,201	1,331.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
B03	602,563	4,522,545	1,353.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
B04	602,825	4,521,968	1,380.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
B05	602,986	4,521,188	1,420.5 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C02-A	599,187	4,523,128	1,328.8 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (9) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C03	599,717	4,522,840	1,375.4 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C04	600,145	4,522,493	1,399.2 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C05	600,368	4,522,142	1,388.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C06	600,734	4,521,827	1,440.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C07	600,889	4,521,501	1,448.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C08	601,394	4,520,765	1,527.4 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C09	601,894	4,519,662	1,405.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C10	602,361	4,519,469	1,403.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C11	602,574	4,518,992	1,389.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
D01	595,139	4,524,387	1,139.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (5) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
D02	595,548	4,523,917	1,185.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (6) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
D03	595,970	4,523,584	1,191.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (7) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
D04	595,720	4,522,668	1,191.3 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (8) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
D05	596,429	4,522,287	1,204.5 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
E01	595,840	4,521,016	1,265.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
E02-A	596,161	4,520,897	1,249.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
E03	596,489	4,520,822	1,285.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
E04	596,884	4,520,707	1,259.3 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
E05	597,316	4,520,684	1,243.8 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
F01	598,609	4,521,073	1,434.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
F02	598,714	4,520,467	1,415.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
F03	598,816	4,520,113	1,404.3 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
F04	600,386	4,519,602	1,438.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		

To be continued on next page...

SHADOW - Main Result

...continued from previous page

Easting	Northing	Z	Row data/Description	WTG type		Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM [RPM]
				Valid	Manufact.				
[m]									
F05	600,550	4,519,255	1,414.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
F06	600,623	4,518,503	1,415.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
H01	598,277	4,518,937	1,379.8 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
H02	598,646	4,518,781	1,411.7 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
H03	599,087	4,518,444	1,441.2 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
J01	600,082	4,517,223	1,548.1 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
J02	600,796	4,517,003	1,573.4 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K01	596,706	4,519,081	1,307.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K02	597,220	4,518,436	1,358.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K03	597,480	4,518,150	1,380.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K04	597,755	4,517,908	1,383.4 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K05	597,969	4,517,594	1,374.1 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K06	598,725	4,517,606	1,467.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K07	599,038	4,517,467	1,507.8 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
L04	597,640	4,516,709	1,461.3 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
L05	597,793	4,516,384	1,448.1 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
L06	598,317	4,516,327	1,446.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
L07	598,490	4,515,860	1,498.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
L08	599,054	4,515,525	1,579.5 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
L09	599,341	4,515,113	1,621.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
M05	595,155	4,516,474	1,310.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
M06	595,359	4,516,224	1,316.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
M07	595,799	4,515,977	1,343.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
M08	596,495	4,515,043	1,365.7 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
M09	597,621	4,515,192	1,422.1 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
M10	598,373	4,515,089	1,510.2 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
N01	595,154	4,515,307	1,343.5 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
N02	595,917	4,514,281	1,373.2 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
N03	596,808	4,514,027	1,393.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
N04	597,466	4,513,806	1,445.4 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
N05	598,213	4,513,816	1,525.8 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0

Shadow receptor-Input

No.	Easting	Northing	Z	Width	Height	Elevation	Slope of window a.g.l.	Direction mode	Eye height (ZVI) a.g.l.
1	596,761	4,517,643	1,313.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2	597,139	4,522,095	1,193.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
3	596,965	4,523,417	1,160.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
4	597,077	4,523,458	1,160.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
5	596,936	4,523,472	1,156.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
6	596,892	4,523,480	1,154.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
7	596,927	4,523,510	1,153.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
8	597,040	4,523,485	1,158.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
9	597,075	4,523,502	1,157.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
10	597,102	4,523,517	1,154.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
11	596,977	4,523,500	1,155.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
12	596,994	4,523,518	1,154.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
13	597,018	4,523,541	1,152.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
14	597,077	4,523,604	1,143.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
15	596,914	4,523,677	1,141.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
16	596,992	4,523,699	1,137.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
17	597,199	4,523,634	1,137.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
18	597,049	4,523,741	1,133.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
19	596,900	4,523,731	1,140.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
20	596,860	4,523,737	1,143.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
21	596,907	4,523,763	1,139.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
22	596,842	4,523,763	1,143.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
23	596,865	4,523,793	1,141.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
24	596,900	4,523,815	1,139.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
25	597,003	4,523,811	1,135.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
26	597,072	4,523,791	1,132.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
27	597,165	4,523,791	1,130.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0

To be continued on next page...

SHADOW - Main Result

...continued from previous page

No.	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l. [m]
28	597,152	4,523,804	1,130.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
29	597,130	4,523,806	1,129.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
30	596,902	4,523,866	1,139.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
31	596,973	4,523,866	1,136.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
32	597,246	4,523,843	1,135.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
33	597,237	4,523,800	1,135.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
34	597,016	4,524,431	1,138.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
35	597,096	4,524,432	1,139.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
36	597,128	4,524,422	1,140.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
37	597,169	4,524,418	1,140.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
38	597,284	4,524,428	1,142.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
39	597,044	4,524,382	1,137.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
40	597,320	4,524,323	1,135.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
41	597,161	4,524,663	1,147.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
42	597,211	4,524,594	1,146.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
43	601,007	4,524,052	1,253.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
44	594,004	4,524,632	1,054.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
45	593,985	4,524,684	1,054.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
46	596,765	4,523,743	1,146.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
47	596,801	4,523,680	1,147.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
48	596,728	4,523,747	1,148.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
49	596,687	4,523,749	1,149.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
50	596,950	4,523,415	1,160.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
51	597,031	4,523,606	1,146.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
52	596,991	4,523,563	1,150.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
53	597,117	4,523,632	1,135.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
54	597,136	4,523,639	1,134.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
55	596,912	4,523,736	1,139.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
56	596,922	4,523,769	1,137.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
57	597,086	4,522,102	1,193.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
58	597,040	4,514,798	1,418.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0

Calculation Results

Shadow receptor

Shadow, worst case

No.	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
1	72:44	165	0:37	35:37
2	102:56	119	1:14	50:11
3	64:03	149	0:42	33:11
4	47:55	130	0:34	25:18
5	67:14	159	0:39	35:13
6	78:28	186	0:41	40:52
7	71:38	178	0:39	37:31
8	51:52	138	0:35	27:30
9	48:05	135	0:34	25:38
10	30:47	82	0:33	16:23
11	60:46	154	0:37	32:06
12	58:23	152	0:36	30:56
13	55:59	152	0:36	29:44
14	31:08	82	0:34	17:05
15	57:40	140	0:39	31:15
16	34:09	84	0:36	19:33
17	15:21	38	0:30	8:58
18	30:13	77	0:34	17:34
19	49:30	126	0:39	27:50
20	47:24	117	0:41	27:16
21	44:30	115	0:39	25:34
22	43:23	93	0:41	25:40
23	41:03	91	0:40	24:35
24	37:58	87	0:39	22:52
25	31:53	79	0:35	19:03
26	28:41	76	0:33	16:58

Shadow, expected values

No.	Shadow hours per year [h/year]
1	35:37
2	50:11
3	33:11
4	25:18
5	35:13
6	40:52
7	37:31
8	27:30
9	25:38
10	16:23
11	32:06
12	30:56
13	29:44
14	17:05
15	31:15
16	19:33
17	8:58
18	17:34
19	27:50
20	27:16
21	25:34
22	25:40
23	24:35
24	22:52
25	19:03
26	16:58

To be continued on next page...

SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case			Shadow, expected values	
	Shadow hours	Shadow days	Max shadow	Shadow hours	
	per year [h/year]	[days/year]	hours per day [h/day]	per year [h/year]	
27	15:22	40	0:31	9:24	
28	25:15	71	0:31	14:56	
29	25:57	72	0:31	15:23	
30	37:13	85	0:38	22:36	
31	33:00	80	0:36	20:00	
32	13:28	36	0:29	8:14	
33	13:45	36	0:29	8:23	
34	41:16	102	0:30	19:46	
35	30:37	76	0:29	13:24	
36	28:54	80	0:28	12:45	
37	23:19	70	0:27	10:30	
38	16:43	52	0:25	7:53	
39	42:41	114	0:30	20:37	
40	13:21	42	0:25	6:59	
41	7:20	30	0:18	3:03	
42	19:56	54	0:26	8:25	
43	0:00	0	0:00	0:00	
44	16:37	41	0:32	7:17	
45	15:57	40	0:31	6:41	
46	51:29	104	0:45	30:21	
47	57:39	133	0:44	32:28	
48	55:38	109	0:47	32:59	
49	60:59	112	0:49	36:21	
50	66:50	153	0:43	34:33	
51	58:14	158	0:35	30:38	
52	62:51	169	0:36	33:06	
53	28:39	77	0:32	15:51	
54	27:29	75	0:32	15:15	
55	49:08	125	0:39	27:34	
56	37:06	86	0:38	21:55	
57	118:40	116	1:19	57:25	
58	119:04	229	0:57	51:35	

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

No.	Name	Worst case [h/year]	Expected [h/year]
A01-A	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (36)	0:00	0:00
A02-A	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (59)	0:00	0:00
A03	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (60)	0:00	0:00
A04	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (1)	0:00	0:00
A05	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (2)	0:00	0:00
A06	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (3)	0:00	0:00
A07	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (4)	0:00	0:00
B01	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (41)	0:00	0:00
B02	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (43)	0:00	0:00
B03	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (44)	0:00	0:00
B04	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (48)	0:00	0:00
B05	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (50)	0:00	0:00
C02-A	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (9)	0:00	0:00
C03	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (10)	0:00	0:00
C04	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (42)	0:00	0:00
C05	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (45)	0:00	0:00
C06	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (46)	0:00	0:00
C07	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (47)	0:00	0:00
C08	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (49)	0:00	0:00
C09	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (53)	0:00	0:00
C10	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (54)	0:00	0:00
C11	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (55)	0:00	0:00
D01	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (5)	22:08	9:30
D02	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (6)	86:49	44:31
D03	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (7)	201:01	107:09
D04	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (8)	86:25	38:43
D05	VESTAS V162 5600 162.0 IO! hub: 125.0 m (TOT: 206.0 m) (12)	96:26	47:34

To be continued on next page...

SHADOW - Main Result

...continued from previous page

No.	Name	Worst case [h/year]	Expected [h/year]
E01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (11)	0:00	0:00
E02-A	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (13)	0:00	0:00
E03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (14)	0:00	0:00
E04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (15)	0:00	0:00
E05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (16)	0:00	0:00
F01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (17)	0:00	0:00
F02	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (18)	0:00	0:00
F03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (19)	0:00	0:00
F04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (51)	0:00	0:00
F05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (52)	0:00	0:00
F06	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (56)	0:00	0:00
H01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (21)	0:00	0:00
H02	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (26)	0:00	0:00
H03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (27)	0:00	0:00
J01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (57)	0:00	0:00
J02	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (58)	0:00	0:00
K01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (20)	0:00	0:00
K02	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (22)	0:00	0:00
K03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (23)	0:00	0:00
K04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (24)	35:08	25:48
K05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (25)	15:40	8:31
K06	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (28)	0:00	0:00
K07	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (35)	0:00	0:00
L04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (33)	21:56	3:52
L05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (34)	0:00	0:00
L06	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (38)	0:00	0:00
L07	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (39)	0:00	0:00
L08	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (40)	0:00	0:00
L09	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (65)	0:00	0:00
M05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (29)	0:00	0:00
M06	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (30)	0:00	0:00
M07	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (31)	0:00	0:00
M08	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (62)	68:28	30:08
M09	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (37)	0:00	0:00
M10	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (64)	16:07	11:15
N01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (32)	0:00	0:00
N02	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (61)	11:17	6:18
N03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (63)	0:00	0:00
N04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (66)	0:00	0:00
N05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (67)	23:12	4:16

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

Shadow receptor: 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (1)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March	April	May	June	
1	07:32	08:50 (L04)	07:19	06:43	06:53	07:31 (K05)	06:07
	16:50	28	09:18 (L04)	17:24	19:31	08:00 (K05)	20:03
2	07:32	08:50 (L04)	07:18	06:41	06:51	07:31 (K05)	06:06
	16:51	29	09:19 (L04)	17:25	19:32	07:59 (K05)	20:04
3	07:33	08:51 (L04)	07:17	06:40	06:49	07:31 (K05)	06:05
	16:51	28	09:19 (L04)	17:26	19:33	07:57 (K05)	20:05
4	07:33	08:52 (L04)	07:16	06:38	06:48	07:33 (K05)	06:03
	16:52	27	09:19 (L04)	17:27	19:34	07:57 (K05)	20:06
5	07:33	08:52 (L04)	07:15	06:37	06:46	07:34 (K05)	06:02
	16:53	27	09:19 (L04)	17:28	19:35	07:55 (K05)	20:07
6	07:33	08:52 (L04)	07:14	06:35	06:44	07:35 (K05)	06:01
	16:54	27	09:19 (L04)	17:30	19:36	07:52 (K05)	20:08
7	07:32	08:53 (L04)	07:13	06:34	06:43	07:38 (K05)	06:00
	16:55	26	09:19 (L04)	17:31	19:37	07:50 (K05)	20:09
8	07:32	08:54 (L04)	07:11	07:32	06:41	05:59	06:41 (K04)
	16:56	25	09:19 (L04)	17:32	19:38	20:10	05:37
9	07:32	08:55 (L04)	07:10	07:30	06:40	05:58	06:41 (K04)
	16:57	24	09:19 (L04)	17:33	19:40	20:11	05:36
10	07:32	08:56 (L04)	07:09	07:29	06:38	05:56	06:41 (K04)
	16:58	23	09:19 (L04)	17:35	19:41	20:12	05:36
11	07:32	08:57 (L04)	07:08	07:27	06:36	05:55	06:41 (K04)
	16:59	21	09:18 (L04)	17:36	19:42	20:13	05:35
12	07:31	08:58 (L04)	07:07	07:26	06:35	05:54	06:41 (K04)
	17:00	20	09:18 (L04)	17:37	19:43	20:14	05:34
13	07:31	09:00 (L04)	07:05	07:24	06:33	05:53	06:41 (K04)
	17:01	18	09:18 (L04)	17:38	19:44	20:15	05:33
14	07:31	09:01 (L04)	07:04	07:22	06:32	05:52	06:41 (K04)
	17:02	16	09:17 (L04)	17:40	19:45	20:16	05:32
15	07:30	09:03 (L04)	07:03	07:21	06:30	05:51	06:41 (K04)
	17:03	13	09:16 (L04)	17:41	19:46	20:17	05:31
16	07:30	09:05 (L04)	07:02	07:19	06:29	05:50	06:41 (K04)
	17:04	9	09:14 (L04)	17:42	19:47	20:18	05:30
17	07:30		07:00	07:17	06:27	05:49	06:42 (K04)
	17:06		17:43	19:15	19:48	20:19	05:29
18	07:29		06:59	07:16	06:26	05:48	06:42 (K04)
	17:07		17:44	19:16	19:49	20:20	05:28
19	07:29		06:58	07:14	06:24	05:48	06:42 (K04)
	17:08		17:46	19:17	19:50	20:21	05:27
20	07:28		06:56	07:12	07:44 (K05)	06:23	05:26
	17:09		17:47	19:18	12	07:56 (K05)	19:51
21	07:27		06:55	07:11	07:40 (K05)	06:21	05:25
	17:10		17:48	19:19	18	07:58 (K05)	19:52
22	07:27		06:53	07:09	07:38 (K05)	06:20	05:24
	17:11		17:49	19:21	21	07:59 (K05)	19:53
23	07:26		06:52	07:07	07:37 (K05)	06:18	05:23
	17:13		17:50	19:22	24	08:01 (K05)	19:54
24	07:25		06:50	07:06	07:35 (K05)	06:17	05:22
	17:14		17:52	19:23	26	08:01 (K05)	19:55
25	07:25		06:49	07:04	07:34 (K05)	06:15	05:21
	17:15		17:53	19:24	28	08:02 (K05)	19:56
26	07:24		06:47	07:02	07:33 (K05)	06:14	05:20
	17:16		17:54	19:25	29	08:02 (K05)	19:57
27	07:23		06:46	07:01	07:32 (K05)	06:13	05:19
	17:17		17:55	19:26	30	08:02 (K05)	19:58
28	07:22		06:44	06:59	07:31 (K05)	06:11	05:18
	17:19		17:56	19:27	31	08:02 (K05)	19:59
29	07:22			06:57	07:32 (K05)	06:10	05:17
	17:20			19:28	30	08:02 (K05)	20:01
30	07:21			06:56	07:31 (K05)	06:09	05:16
	17:21			19:29	30	08:01 (K05)	20:02
31	07:20			06:54	07:31 (K05)	06:11	05:15
	17:22			19:30	29	08:00 (K05)	20:31
Potential sun hours	298		297	369	398	448	451
Total, worst case	361			308	275	931	
Sun reduction	0.45			0.73	0.82	0.92	
Oper. time red.	1.00			1.00	1.00	1.00	
Wind dir. red.	0.37			0.64	0.70	0.78	
Total reduction	0.16			0.44	0.54	0.67	
Total, real	57			135	148	626	

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)
	Sun set (hh:mm)					

SHADOW - Calendar

Shadow receptor: 1 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (1)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 0.45 0.62 0.73 0.82 0.92 0.94 0.97 0.96 0.93 0.84 0.61 0.47

Operational time
 N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
 23 65 319 1,935 1,830 119 5 24 340 1,432 1,766 761 99 19 10 13 8,760

	July	August	September	October	November	December
1	05:40	06:04	06:50 (K04) 06:34	07:04	06:38	07:12 08:39 (L04)
	20:43	20:25	37 07:27 (K04) 19:43	18:53	18:06	16:41 21 09:00 (L04)
2	05:40	06:05	06:50 (K04) 06:35	07:05	06:39	07:13 08:38 (L04)
	20:43	20:24	37 07:27 (K04) 19:41	18:51	17:05	16:41 23 09:01 (L04)
3	05:41	06:06	06:50 (K04) 06:36	07:06	06:40	07:14 08:38 (L04)
	20:43	20:23	37 07:27 (K04) 19:40	18:49	17:04	16:41 24 09:02 (L04)
4	05:41	06:07	06:50 (K04) 06:37	07:07	06:41	07:15 08:38 (L04)
	20:43	20:22	37 07:27 (K04) 19:38	18:48	17:02	16:41 25 09:03 (L04)
5	05:42	06:08	06:50 (K04) 06:38	07:34 (K05) 07:08	06:42	07:16 08:38 (L04)
	20:43	20:21	37 07:27 (K04) 19:36	12 07:46 (K05) 18:46	17:01	16:40 26 09:04 (L04)
6	05:43	06:09	06:51 (K04) 06:39	07:31 (K05) 07:09	06:44	07:17 08:38 (L04)
	20:43	20:20	36 07:27 (K04) 19:35	17 07:48 (K05) 18:44	17:00	16:40 27 09:05 (L04)
7	05:43	06:10	06:51 (K04) 06:40	07:29 (K05) 07:10	06:45	07:18 08:38 (L04)
	20:42	20:19	36 07:27 (K04) 19:33	21 07:50 (K05) 18:43	16:59	16:40 27 09:05 (L04)
8	05:44	06:10	06:51 (K04) 06:41	07:27 (K05) 07:11	06:46	07:19 08:39 (L04)
	20:42	20:17	35 07:26 (K04) 19:31	24 07:51 (K05) 18:41	16:58	16:40 27 09:06 (L04)
9	05:44	06:11	06:52 (K04) 06:42	07:26 (K05) 07:12	06:47	07:20 08:39 (L04)
	20:42	20:16	34 07:26 (K04) 19:30	25 07:51 (K05) 18:40	16:57	16:40 28 09:07 (L04)
10	05:45	06:12	06:52 (K04) 06:43	07:25 (K05) 07:13	06:48	07:21 08:39 (L04)
	20:41	20:15	33 07:25 (K04) 19:28	27 07:52 (K05) 18:38	16:56	16:40 29 09:08 (L04)
11	05:46	06:13	06:53 (K04) 06:44	07:24 (K05) 07:14	06:50	07:22 08:40 (L04)
	20:41	20:14	32 07:25 (K04) 19:26	28 07:52 (K05) 18:36	16:55	16:40 28 09:08 (L04)
12	05:47	07:05 (K04) 06:14	06:54 (K04) 06:45	07:23 (K05) 07:15	06:51	07:22 08:40 (L04)
	20:41	6 07:11 (K04) 20:12	30 07:24 (K04) 19:25	30 07:53 (K05) 18:35	16:54	16:40 29 09:09 (L04)
13	05:47	07:02 (K04) 06:15	06:54 (K04) 06:46	07:22 (K05) 07:16	06:52	07:23 08:40 (L04)
	20:40	11 07:13 (K04) 20:11	29 07:23 (K04) 19:23	31 07:53 (K05) 18:33	16:53	16:40 29 09:09 (L04)
14	05:48	07:01 (K04) 06:16	06:56 (K04) 06:47	07:22 (K05) 07:17	06:53	07:24 08:40 (L04)
	20:40	14 07:15 (K04) 20:10	25 07:21 (K04) 19:21	30 07:52 (K05) 18:32	16:52	16:41 30 09:10 (L04)
15	05:49	07:00 (K04) 06:17	06:56 (K04) 06:48	07:22 (K05) 07:19	06:54	07:25 08:41 (L04)
	20:39	17 07:17 (K04) 20:08	23 07:19 (K04) 19:20	30 07:52 (K05) 18:30	16:51	16:41 30 09:11 (L04)
16	05:50	06:59 (K04) 06:18	06:58 (K04) 06:49	07:21 (K05) 07:20	06:55	07:25 08:42 (L04)
	20:38	19 07:18 (K04) 20:07	19 07:17 (K04) 19:18	31 07:52 (K05) 18:29	16:50	16:41 30 09:12 (L04)
17	05:50	06:57 (K04) 06:19	07:00 (K04) 06:50	07:22 (K05) 07:21	06:57	07:26 08:42 (L04)
	20:38	22 07:19 (K04) 20:06	14 07:14 (K04) 19:16	29 07:51 (K05) 18:27	16:49	16:41 29 09:11 (L04)
18	05:51	06:57 (K04) 06:20	06:51	07:22 (K05) 07:22	06:58	07:27 08:42 (L04)
	20:37	23 07:20 (K04) 20:04	19:15	28 07:50 (K05) 18:25	16:49	16:42 30 09:12 (L04)
19	05:52	06:56 (K04) 06:21	06:52	07:22 (K05) 07:23	06:59	07:27 08:42 (L04)
	20:37	25 07:21 (K04) 20:03	19:13	27 07:49 (K05) 18:24	16:48	16:42 30 09:12 (L04)
20	05:53	06:55 (K04) 06:22	06:53	07:22 (K05) 07:24	07:00	07:28 08:43 (L04)
	20:36	27 07:22 (K04) 20:01	19:11	25 07:47 (K05) 18:23	16:47	16:42 30 09:13 (L04)
21	05:54	06:55 (K04) 06:23	06:54	07:23 (K05) 07:25	07:01	07:28 08:44 (L04)
	20:35	28 07:23 (K04) 20:00	19:10	22 07:45 (K05) 18:21	16:46	16:43 30 09:14 (L04)
22	05:55	06:55 (K04) 06:24	06:55	07:24 (K05) 07:26	07:02	07:29 08:44 (L04)
	20:34	29 07:24 (K04) 19:58	19:08	19 07:43 (K05) 18:20	16:46	16:43 30 09:14 (L04)
23	05:55	06:53 (K04) 06:25	06:56	07:26 (K05) 07:27	07:04	07:29 08:44 (L04)
	20:34	31 07:24 (K04) 19:57	19:06	14 07:40 (K05) 18:18	16:45	16:44 30 09:14 (L04)
24	05:56	06:53 (K04) 06:26	06:57	07:30 (K05) 07:29	07:05	07:30 08:45 (L04)
	20:33	32 07:25 (K04) 19:55	19:04	5 07:35 (K05) 18:17	16:45	16:44 30 09:15 (L04)
25	05:57	06:53 (K04) 06:27	06:58	07:30	07:06	07:30 08:45 (L04)
	20:32	32 07:25 (K04) 19:54	19:03	18:15	16:44	16:45 30 09:15 (L04)
26	05:58	06:52 (K04) 06:28	06:59	07:31	07:07	08:44 (L04) 07:31
	20:31	34 07:26 (K04) 19:52	19:01	18:14	16:43	9 08:53 (L04) 16:45
27	05:59	06:52 (K04) 06:29	07:00	07:32	07:08	08:42 (L04) 07:31
	20:30	34 07:26 (K04) 19:51	18:59	18:13	16:43	13 08:55 (L04) 16:46
28	06:00	06:52 (K04) 06:30	07:01	07:33	07:09	08:41 (L04) 07:31
	20:29	35 07:27 (K04) 19:49	18:58	18:11	16:43	16 08:57 (L04) 16:47
29	06:01	06:52 (K04) 06:31	07:02	07:34	07:10	08:40 (L04) 07:32
	20:28	35 07:27 (K04) 19:48	18:56	18:10	16:42	18 08:58 (L04) 16:47
30	06:02	06:51 (K04) 06:32	07:03	07:35	07:11	08:39 (L04) 07:32
	20:27	37 07:28 (K04) 19:46	18:54	18:09	16:42	20 08:59 (L04) 16:48
31	06:03	06:50 (K04) 06:33		07:37		29 08:49 (L04) 07:32
	20:26	37 07:27 (K04) 19:44		18:07		16:49 29 09:18 (L04)
Potential sun hours	458	428	375	346	299	288
Total, worst case	528	531	475		76	879
Sun reduction	0.97	0.96	0.93		0.61	0.47
Oper. time red.	1.00	1.00	1.00		1.00	1.00
Wind dir. red.	0.78	0.78	0.64		0.37	0.37
Total reduction	0.71	0.70	0.56		0.21	0.16
Total, real	374	373	265		16	144

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:

2019-12-01_Fountain Wind_SFA

Licensed user:

EDR
217 Montgomery St., Suite 1000
US-SYRACUSE, NY 13202
(315) 471 0688Calculated:
12/12/2019 7:28 PM/3.2.744

SHADOW - Calendar

Shadow receptor: 2 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.45 0.62 0.73 0.82 0.92 0.94 0.97 0.96 0.93 0.84 0.61 0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March	April	May	June	July	August	September	October	November	December						
1	07:32	07:19	06:43	06:52	06:07	18:53 (D05)	05:39	18:52 (D05)	05:40	19:02 (D05)	06:04	18:57 (D05)	06:34	07:04	06:38	07:12		
	16:50	17:23	17:57	19:31	20:03	42	19:35 (D05)	20:32	64	20:01 (D04)	20:44	37	19:39 (D05)	20:25	62	20:01 (D04)	19:43	
2	07:33	07:18	06:41	06:51	06:06	18:52 (D05)	05:38	18:53 (D05)	05:40	19:02 (D05)	06:05	18:57 (D05)	06:35	07:05	06:39	07:13		
	16:50	17:25	17:58	19:32	20:04	44	19:36 (D05)	20:33	62	20:01 (D04)	20:43	42	20:00 (D04)	20:24	60	20:00 (D04)	19:41	
3	07:33	07:17	06:40	06:49	06:05	18:50 (D05)	05:38	18:54 (D05)	05:41	19:02 (D05)	06:06	18:57 (D05)	06:36	07:06	06:40	07:14		
	16:51	17:26	18:00	19:33	20:05	46	19:36 (D05)	20:34	60	20:01 (D04)	20:43	46	20:02 (D04)	20:23	58	19:59 (D04)	19:40	
4	07:33	07:16	06:38	06:48	06:03	18:50 (D05)	05:38	18:54 (D05)	05:41	19:02 (D05)	06:06	18:58 (D05)	06:37	07:07	06:41	07:15		
	16:52	17:27	18:01	19:34	20:06	47	19:37 (D05)	20:34	58	20:00 (D04)	20:43	49	20:04 (D04)	20:22	53	19:58 (D04)	19:38	
5	07:33	07:15	06:37	06:46	06:02	18:49 (D05)	05:37	18:55 (D05)	05:42	19:02 (D05)	06:07	18:58 (D05)	06:38	07:08	06:43	07:16		
	16:53	17:28	18:02	19:35	20:07	48	19:37 (D05)	20:35	56	20:00 (D04)	20:43	50	20:04 (D04)	20:21	50	19:48 (D05)	19:36	
6	07:33	07:14	06:35	06:44	06:01	18:49 (D05)	05:37	18:56 (D05)	05:42	19:02 (D05)	06:08	18:58 (D05)	06:39	07:09	06:44	07:17		
	16:54	17:30	18:03	19:36	20:08	49	19:38 (D05)	20:36	54	20:00 (D04)	20:43	54	20:06 (D04)	20:20	50	19:48 (D05)	19:35	
7	07:33	07:13	06:34	06:43	06:00	18:48 (D05)	05:37	18:55 (D05)	05:43	19:01 (D05)	06:09	18:59 (D05)	06:40	07:10	06:45	07:18		
	16:55	17:31	18:04	19:37	20:09	50	19:38 (D05)	20:36	52	19:58 (D04)	20:42	56	20:06 (D04)	20:19	48	19:47 (D05)	19:33	
8	07:32	07:11	07:32	06:41	05:59	18:48 (D05)	05:36	18:56 (D05)	05:44	19:01 (D05)	06:10	18:59 (D05)	06:41	07:11	06:46	07:19		
	16:56	17:32	19:05	19:38	20:10	51	19:39 (D05)	20:37	50	19:58 (D04)	20:42	58	20:07 (D04)	20:17	48	19:47 (D05)	19:31	
9	07:32	07:10	07:30	06:39	05:57	18:48 (D05)	05:36	18:57 (D05)	05:44	19:02 (D05)	06:11	19:00 (D05)	06:42	07:12	06:47	07:20		
	16:57	17:33	19:06	19:40	20:11	55	19:49 (D04)	20:38	46	19:57 (D04)	20:42	59	20:08 (D04)	20:16	46	19:46 (D05)	19:30	
10	07:32	07:09	07:29	06:38	05:56	18:47 (D05)	05:36	18:58 (D05)	05:45	19:01 (D05)	06:12	19:00 (D05)	06:43	07:13	06:48	07:21		
	16:58	17:35	19:07	19:41	20:12	58	19:49 (D04)	20:38	44	19:57 (D04)	20:41	61	20:08 (D04)	20:15	45	19:45 (D05)	19:28	
11	07:32	07:08	07:27	06:36	05:55	18:47 (D05)	05:36	18:58 (D05)	05:46	19:01 (D05)	06:13	19:01 (D05)	06:44	07:14	06:50	07:22		
	16:59	17:36	19:09	19:42	20:13	60	19:50 (D04)	20:39	40	19:55 (D04)	20:41	63	20:09 (D04)	20:14	43	19:44 (D05)	19:26	
12	07:32	07:07	07:26	06:35	05:54	18:46 (D05)	05:36	18:59 (D05)	05:46	19:01 (D05)	06:14	19:02 (D05)	06:45	07:15	06:51	07:23		
	17:00	17:37	19:10	19:43	20:14	64	19:51 (D04)	20:39	36	19:35 (D05)	20:41	64	20:10 (D04)	20:12	41	19:43 (D05)	19:25	
13	07:31	07:05	07:24	06:33	05:53	18:46 (D05)	05:36	18:59 (D05)	05:47	19:00 (D05)	06:15	19:02 (D05)	06:46	07:16	06:52	07:23		
	17:01	17:38	19:11	19:44	20:15	65	19:51 (D04)	20:40	36	19:35 (D05)	20:40	66	20:10 (D04)	20:11	39	19:41 (D05)	19:23	
14	07:31	07:04	07:22	06:32	05:52	18:47 (D05)	05:36	19:00 (D05)	05:48	19:00 (D05)	06:16	19:03 (D05)	06:47	07:17	06:53	07:24		
	17:02	17:40	19:12	19:45	20:16	66	19:53 (D04)	20:40	35	19:35 (D05)	20:40	68	20:11 (D04)	20:10	37	19:40 (D05)	19:21	
15	07:31	07:03	07:21	06:30	05:51	18:47 (D05)	05:36	19:00 (D05)	05:49	19:00 (D05)	06:17	19:04 (D05)	06:48	07:19	06:54	07:25		
	17:03	17:41	19:13	19:46	20:17	67	19:54 (D04)	20:41	35	19:35 (D05)	20:39	70	20:12 (D04)	20:08	34	19:38 (D05)	19:20	
16	07:30	07:02	07:19	06:28	05:50	18:47 (D05)	05:36	19:00 (D05)	05:49	19:00 (D05)	06:18	19:05 (D05)	06:49	07:20	06:56	07:26		
	17:04	17:42	19:14	19:47	20:18	68	19:55 (D04)	20:41	35	19:35 (D05)	20:39	70	20:12 (D04)	20:07	32	19:37 (D05)	19:18	
17	07:30	07:00	07:17	06:27	05:49	18:47 (D05)	05:36	19:01 (D05)	05:50	18:59 (D05)	06:19	19:07 (D05)	06:50	07:21	06:57	07:26		
	17:05	17:43	19:15	19:48	20:19	69	19:56 (D04)	20:41	34	19:35 (D05)	20:38	72	20:12 (D04)	20:06	28	19:35 (D05)	19:16	
18	07:29	06:59	07:16	06:25	05:48	18:47 (D05)	05:36	19:00 (D05)	05:51	18:59 (D05)	06:20	19:09 (D05)	06:51	07:22	06:58	07:27		
	17:07	17:44	19:16	19:49	20:20	70	19:57 (D04)	20:42	34	19:35 (D05)	20:37	72	20:12 (D04)	20:04	23	19:32 (D05)	19:15	
19	07:29	06:58	07:14	06:24	05:47	18:47 (D05)	05:36	19:01 (D05)	05:52	18:59 (D05)	06:21	19:13 (D05)	06:52	07:23	06:59	07:27		
	17:08	17:46	19:17	19:50	20:21	70	19:57 (D04)	20:42	34	19:35 (D05)	20:37	73	20:12 (D04)	20:03	16	19:29 (D05)	19:13	
20	07:28	06:56	07:12	06:22	05:47	18:47 (D05)	05:36	19:01 (D05)	05:53	18:59 (D05)	06:22	19:05 (D05)	06:53	07:24	07:00	07:28		
	17:09	17:47	19:18	19:51	20:22	71	19:58 (D04)	20:42	34	19:35 (D05)	20:36	72	20:11 (D04)	20:01	32	19:37 (D05)	19:18	
21	07:28	06:55	07:11	06:21	05:46	18:48 (D05)	05:36	19:01 (D05)	05:54	18:59 (D05)	06:23	19:07 (D05)	06:54	07:25	07:01	07:29		
	17:10	17:48	19:19	19:52	20:23	71	19:59 (D04)	20:43	34	19:35 (D05)	20:35	72	20:11 (D04)	20:00	39	19:41 (D05)	19:23	
22	07:27	06:53	07:09	06:20	05:45	18:48 (D05)	05:36	19:02 (D05)	05:54	18:58 (D05)	06:24	19:09 (D05)	06:55	07:26	07:03	07:29		
	17:11	17:49	19:21	19:53	20:24	72	20:00 (D04)	20:43	34	19:36 (D05)	20:35	71	20:09 (D04)	19:58	41	19:40 (D05)	19:27	
23	07:26	06:52	07:07	06:18	05:48	18:48 (D05)	05:37	19:02 (D05)	05:55	18:58 (D05)	06:25	19:06 (D05)	06:56	07:27	07:04	07:30		
	17:12	17:50	19:22	19:54	5	19:17 (D05)	05:44	19:02 (D04)	20:43	34	19:36 (D05)	20:34	71	20:09 (D04)	19:57	42	19:41 (D05)	19:28
24	07:26	06:50	07:06	06:17	05:46	18:49 (D05)	05:37	19:02 (D05)	05:56	18:58 (D05)	06:26	19:06 (D05)	06:57	07:29	07:05	07:30		
	17:13	17:51	19:23	19:55	18	19:24 (D05)	05:45	19:02 (D04)	20:43	34	19:36 (D05)	20:33	70	20:08 (D04)	19:55	43	19:42 (D05)	19:29
25	07:25	06:49	07:04	06:15	05:45	18:49 (D05)	05:37	19:03 (D05)	05:57	18:58 (D05)	06:27	19:05 (D05)	06:58	07:30	07:06	07:30		
	17:15	17:53	19:24	19:56	24	19:27 (D05)	05:46	19:03 (D04)	20:43	34	19:37 (D05)	20:32	69	20:07 (D04)	19:54	44	19:43 (D05)	19:31
26	07:24	06:48	07:02	06:14	05:45	18:49 (D05)	05:38	19:03 (D05)	05:58	18:58 (D05)	06:28	19:05 (D05)	06:59	07:31	07:07	07:31		
	17:16	17:54	19:25	19:57	28	19:28 (D05)	05:47	19:03 (D04)	20:44	34	19:37 (D05)	20:31	69	20:07 (D04)	19:52	45	19:44 (D05)	19:33
27	07:23	06:46	07:01	06:12	05:45	18:50 (D05)	05:38	19:02 (D05)	05:59	18:58 (D05)	06:29	19:05 (D05)	06:59	07:32	07:08	07:31		
	17:17	17:55	19:26	19:58	32	19:30 (D05)	05:48	19:02 (D04)	20:44	35	19:37 (D05)	20:30	68	20:06 (D04)	19:51	46	19:45 (D05)	19:33
28	07:22	06:44	06:59	06:11	05:47	18:50 (D05)	05:38	19:03 (D05)	0									

SHADOW - Calendar

Shadow receptor: 3 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (3)

Assumptions for shadow calculations

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

	Operational time																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
	23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March	April	May	June
1 07:32		07:19	16:26 (D04)	06:43	06:52	06:07
16:50		17:23	25 16:51 (D04)	17:57	19:31	19:22 (D03)
2 07:33		07:18	16:26 (D04)	06:41	06:51	20:32
16:50		17:25	25 16:51 (D04)	17:58	19:32	18:48 (D03)
3 07:33		07:17	16:27 (D04)	06:40	06:49	20:33
16:51		17:26	23 16:50 (D04)	18:00	19:33	19:20 (D03)
4 07:33		07:16	16:28 (D04)	06:38	06:48	20:34
16:52		17:27	22 16:50 (D04)	18:01	19:34	18:48 (D03)
5 07:33		07:15	16:29 (D04)	06:37	06:46	20:34
16:53		17:28	20 16:49 (D04)	18:02	19:35	18:49 (D03)
6 07:33		07:14	16:31 (D04)	06:35	06:44	20:35
16:54		17:30	17 16:48 (D04)	18:03	19:36	19:46 (D02)
7 07:33		07:13	16:33 (D04)	06:34	06:43	20:36
16:55		17:31	13 16:46 (D04)	18:04	19:37	19:47 (D02)
8 07:32		07:12	16:36 (D04)	07:32	06:41	20:36
16:56		17:32	8 16:44 (D04)	19:05	19:38	18:50 (D03)
9 07:32		07:10		07:30	06:39	05:37
16:57		17:33		19:06	19:40	19:49 (D02)
10 07:32		07:09		07:29	06:38	20:38
16:58		17:35		19:07	19:41	19:49 (D02)
11 07:32		07:08		07:27	06:36	20:38
16:59		17:36		19:09	19:42	18:59 (D03)
12 07:32		07:07		07:26	06:35	20:39
17:00		17:37		19:10	19:43	19:51 (D02)
13 07:31		07:06		07:24	06:33	20:39
17:01		17:38		19:11	19:44	19:53 (D02)
14 07:31		07:04		07:22	06:32	20:40
17:02		17:39		19:12	19:45	19:53 (D02)
15 07:31	16:30 (D04)	07:03		07:21	06:30	20:40
17:03	8 16:38 (D04)	17:41		19:13	19:46	19:53 (D02)
16 07:30	16:28 (D04)	07:02		07:19	06:28	20:41
17:04	11 16:39 (D04)	17:42		19:14	19:47	19:53 (D02)
17 07:30	16:27 (D04)	07:00		07:17	06:27	20:41
17:05	14 16:41 (D04)	17:43		19:15	19:48	19:53 (D02)
18 07:29	16:26 (D04)	06:59		07:16	06:25	20:41
17:07	16 16:42 (D04)	17:44		19:16	19:49	19:52 (D02)
19 07:29	16:26 (D04)	06:58		07:14	06:24	20:42
17:08	18 16:44 (D04)	17:46		19:17	19:50	19:52 (D02)
20 07:28	16:25 (D04)	06:56		07:12	06:22	20:42
17:09	20 16:45 (D04)	17:47		19:18	19:51	19:52 (D02)
21 07:28	16:25 (D04)	06:55		07:11	06:21	20:42
17:10	21 16:46 (D04)	17:48		19:19	19:52	19:53 (D02)
22 07:27	16:25 (D04)	06:53		07:09	06:19	20:43
17:11	22 16:47 (D04)	17:49		19:21	19:53	19:54 (D02)
23 07:26	16:24 (D04)	06:52		07:07	06:18	20:43
17:12	24 16:48 (D04)	17:50		19:22	19:54	19:55 (D02)
24 07:26	16:24 (D04)	06:50		07:06	06:17	20:43
17:14	25 16:49 (D04)	17:51		19:23	19:55	19:56 (D02)
25 07:25	16:24 (D04)	06:49		07:04	06:15	20:43
17:15	26 16:50 (D04)	17:53		19:24	19:56	19:57 (D02)
26 07:24	16:24 (D04)	06:48		07:02	06:14	20:43
17:16	27 16:51 (D04)	17:54		19:25	19:57	19:58 (D02)
27 07:23	16:24 (D04)	06:46		07:01	06:12	20:44
17:17	27 16:51 (D04)	17:55		19:26	19:59	19:59 (D02)
28 07:22	16:24 (D04)	06:45		06:59	06:11	20:44
17:18	27 16:51 (D04)	17:56		19:27	20:00	19:48 (D02)
29 07:22	16:24 (D04)			06:57	06:10	20:44
17:20	27 16:51 (D04)			19:28	20:01	19:49 (D02)
30 07:21	16:25 (D04)			06:56	06:08	20:44
17:21	26 16:51 (D04)			19:29	20:02	19:50 (D02)
31 07:20	16:25 (D04)			06:54		20:44
17:22	26 16:51 (D04)			19:30		19:51 (D02)
Potential sun hours	298	297	369	398	448	452
Total, worst case	365	0.62		567		830
Sun reduction	0.45			0.82		0.92
Oper. time red.	1.00	1.00		1.00		1.00
Wind dir. red.	0.87	0.87		0.57		0.52
Total reduction	0.41	0.57		0.49		0.50
Total, real	150	87		277		418

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)

SHADOW - Calendar

Shadow receptor: 3 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (3)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July	August	September	October	November	December
1 05:40		06:04	19:37 (D02)	06:34	07:04	06:38
20:44		20:25	24	20:01 (D02)	19:43	18:53
2 05:40		06:05	19:08 (D03)	06:35	07:05	06:39
20:44		20:24	33	20:00 (D02)	19:41	18:51
3 05:41		06:05	19:09 (D03)	06:36	07:06	06:40
20:43		20:23	37	19:59 (D02)	19:40	18:49
4 05:41		06:06	19:04 (D03)	06:37	07:07	06:41
20:43		20:22	39	19:58 (D02)	19:38	18:48
5 05:42		06:07	19:02 (D03)	06:38	07:08	06:43
20:43		20:21	40	19:57 (D02)	19:36	18:46
6 05:42		06:08	19:01 (D03)	06:39	07:09	06:44
20:43		20:20	41	19:56 (D02)	19:35	18:44
7 05:43		06:09	19:00 (D03)	06:40	07:10	06:45
20:43		20:19	41	19:55 (D02)	19:33	18:43
8 05:44		06:10	18:59 (D03)	06:41	07:11	06:46
20:42		20:17	40	19:54 (D02)	19:31	18:41
9 05:44		06:11	18:58 (D03)	06:42	07:12	06:47
20:42		20:16	35	19:52 (D02)	19:30	18:39
10 05:45		06:12	18:57 (D03)	06:43	07:13	06:48
20:42		20:15	33	19:30 (D03)	19:28	18:38
11 05:46		06:13	18:56 (D03)	06:44	07:14	06:50
20:41		20:14	34	19:30 (D03)	19:26	18:36
12 05:46	19:47 (D02)	06:14	18:56 (D03)	06:45	07:15	06:51
20:41	4	19:51 (D02)	20:12	35	19:31 (D03)	19:25
13 05:47	19:44 (D02)	06:15	18:54 (D03)	06:46	07:16	06:52
20:40	9	19:53 (D02)	20:11	36	19:30 (D03)	19:23
14 05:48	19:43 (D02)	06:16	18:54 (D03)	06:47	07:17	06:53
20:40	12	19:55 (D02)	20:10	36	19:30 (D03)	19:21
15 05:49	19:43 (D02)	06:17	18:53 (D03)	06:48	07:19	06:54
20:39	14	19:57 (D02)	20:08	37	19:30 (D03)	19:20
16 05:49	19:42 (D02)	06:18	18:53 (D03)	06:49	07:20	06:56
20:39	16	19:58 (D02)	20:07	37	19:30 (D03)	19:18
17 05:50	19:40 (D02)	06:19	18:53 (D03)	06:50	07:21	06:57
20:38	18	19:58 (D02)	20:06	37	19:30 (D03)	19:16
18 05:51	19:40 (D02)	06:20	18:52 (D03)	06:51	07:22	06:58
20:37	19	19:59 (D02)	20:04	38	19:30 (D03)	19:15
19 05:52	19:40 (D02)	06:21	18:52 (D03)	06:52	07:23	06:59
20:37	20	20:00 (D02)	20:03	38	19:30 (D03)	19:13
20 05:53	19:39 (D02)	06:22	18:52 (D03)	06:53	07:24	07:00
20:36	22	20:01 (D02)	20:01	37	19:29 (D03)	19:11
21 05:54	19:39 (D02)	06:23	18:53 (D03)	06:54	07:25	07:01
20:35	23	20:02 (D02)	20:00	36	19:29 (D03)	19:10
22 05:54	19:38 (D02)	06:24	18:53 (D03)	06:55	07:26	07:03
20:35	23	20:01 (D02)	19:58	35	19:28 (D03)	19:08
23 05:55	19:38 (D02)	06:25	18:53 (D03)	06:56	07:27	07:04
20:34	24	20:02 (D02)	19:57	34	19:27 (D03)	19:06
24 05:56	19:38 (D02)	06:26	18:54 (D03)	06:57	07:29	07:05
20:33	24	20:02 (D02)	19:55	32	19:26 (D03)	19:04
25 05:57	19:37 (D02)	06:27	18:54 (D03)	06:58	07:30	07:06
20:32	26	20:03 (D02)	19:54	31	19:25 (D03)	19:03
26 05:58	19:37 (D02)	06:28	18:55 (D03)	06:59	07:31	07:07
20:31	26	20:03 (D02)	19:52	29	19:24 (D03)	19:01
27 05:59	19:37 (D02)	06:29	18:57 (D03)	07:00	07:32	07:08
20:30	26	20:03 (D02)	19:51	25	19:22 (D03)	18:59
28 06:00	19:37 (D02)	06:30	18:58 (D03)	07:01	07:33	07:09
20:29	27	20:04 (D02)	19:49	22	19:20 (D03)	18:58
29 06:01	19:37 (D02)	06:31	19:00 (D03)	07:02	07:34	07:10
20:28	26	20:03 (D02)	19:48	17	19:17 (D03)	18:56
30 06:02	19:37 (D02)	06:32	19:03 (D03)	07:03	07:35	07:11
20:27	26	20:03 (D02)	19:46	10	19:13 (D03)	18:54
31 06:03	19:37 (D02)	06:33			07:37	
20:26	25	20:02 (D02)	19:45		18:07	
Potential sun hours	458	428		375	346	298
Total, worst case	410	999			519	
Sun reduction	0.97	0.96			0.61	
Oper. time red.	1.00	1.00			1.00	
Wind dir. red.	0.50	0.56			0.87	
Total reduction	0.51	0.56			0.56	
Total, real	208	561			290	

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)
	Sun set (hh:mm)					

SHADOW - Calendar

Shadow receptor: 5 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (5)

Assumptions for shadow calculations

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

	Operational time											
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW
	23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761

	January	February	March	April	May	June
1 07:32		07:19	16:22 (D04)	06:43	06:52	06:07
16:50		17:23	16:39 (D04)	17:57	19:31	19:41 (D02)
2 07:33		07:18	16:25 (D04)	06:41	06:51	20:03
16:50		17:25	16:37 (D04)	17:58	19:32	18:44 (D03)
3 07:33		07:17	16:28 (D04)	06:40	06:49	20:04
16:51		17:26	16:34 (D04)	18:00	19:33	19:42 (D02)
4 07:33	16:19 (D04)	07:16		06:38	06:48	06:03
16:52	6 16:25 (D04)	17:27		18:01	19:34	18:48 (D03)
5 07:33	16:18 (D04)	07:15		06:37	06:46	20:06
16:53	9 16:27 (D04)	17:28		18:02	19:35	18:52 (D03)
6 07:33	16:17 (D04)	07:14		06:35	06:44	20:07
16:54	12 16:29 (D04)	17:30		18:03	19:36	19:44 (D02)
7 07:33	16:17 (D04)	07:13		06:34	06:43	20:08
16:55	13 16:30 (D04)	17:31		18:04	19:37	19:46 (D02)
8 07:32	16:15 (D04)	07:12		07:32	06:41	18:43 (D03)
16:56	16 16:31 (D04)	17:32		19:05	19:39	05:59
9 07:32	16:15 (D04)	07:10		07:30	06:39	19:22 (D02)
16:57	17 16:32 (D04)	17:33		19:06	20 19:10 (D03)	05:36
10 07:32	16:15 (D04)	07:09		07:29	06:38	19:20 (D02)
16:58	18 16:33 (D04)	17:35		19:07	19:41	19:47 (D02)
11 07:32	16:15 (D04)	07:08		07:27	06:36	19:22 (D02)
16:59	20 16:35 (D04)	17:36		19:09	19:42	19:47 (D02)
12 07:32	16:14 (D04)	07:07		07:26	06:35	19:44 (D02)
17:00	21 16:35 (D04)	17:37		19:10	19:43	19:47 (D02)
13 07:31	16:15 (D04)	07:06		07:24	06:33	19:42 (D02)
17:01	21 16:36 (D04)	17:38		19:11	19:44	19:47 (D02)
14 07:31	16:14 (D04)	07:04		07:22	06:32	19:47 (D02)
17:02	23 16:37 (D04)	17:39		19:12	19:45	19:52 (D02)
15 07:31	16:14 (D04)	07:03		07:21	06:30	19:40 (D03)
17:03	24 16:38 (D04)	17:41		19:13	19:46	19:51 (D02)
16 07:30	16:14 (D04)	07:02		07:19	06:28	19:16 (D03)
17:04	24 16:38 (D04)	17:42		19:14	19:47	19:47 (D02)
17 07:30	16:14 (D04)	07:00		07:17	06:27	19:22 (D02)
17:05	26 16:40 (D04)	17:43		19:15	19:48	19:46 (D02)
18 07:29	16:14 (D04)	06:59		07:16	06:25	19:38 (D03)
17:07	26 16:40 (D04)	17:44		19:16	19:49	19:23 (D02)
19 07:29	16:15 (D04)	06:58		07:14	06:24	19:38 (D03)
17:08	26 16:41 (D04)	17:46		19:17	19:50	19:45 (D02)
20 07:28	16:14 (D04)	06:56		07:12	06:22	19:24 (D02)
17:09	27 16:41 (D04)	17:47		19:18	19:51	19:46 (D02)
21 07:28	16:15 (D04)	06:55		07:11	06:21	19:37 (D03)
17:10	27 16:42 (D04)	17:48		19:19	19:52	19:44 (D02)
22 07:27	16:15 (D04)	06:53		07:09	06:19	19:38 (D03)
17:11	27 16:42 (D04)	17:49		19:21	19:53	19:44 (D02)
23 07:26	16:15 (D04)	06:52		07:07	06:18	19:27 (D02)
17:12	27 16:42 (D04)	17:50		19:22	19:54	19:41 (D02)
24 07:26	16:15 (D04)	06:50		07:06	06:17	19:37 (D03)
17:14	27 16:42 (D04)	17:51		19:23	19:55	19:41 (D02)
25 07:25	16:17 (D04)	06:49		07:04	06:15	19:38 (D03)
17:15	26 16:43 (D04)	17:53		19:24	19:56	19:31 (D02)
26 07:24	16:17 (D04)	06:48		07:02	06:14	19:38 (D03)
17:16	26 16:43 (D04)	17:54		19:25	19:57	19:44 (D02)
27 07:23	16:17 (D04)	06:46		07:01	06:12	19:39 (D03)
17:17	25 16:42 (D04)	17:55		19:26	19:59	19:41 (D02)
28 07:22	16:18 (D04)	06:45		06:59	06:11	19:40 (D03)
17:18	24 16:42 (D04)	17:56		19:27	20:00	19:47 (D02)
29 07:22	16:19 (D04)			06:57	06:10	19:40 (D03)
17:20	22 16:41 (D04)			19:28	20:01	19:41 (D03)
30 07:21	16:20 (D04)			06:56	06:08	19:41 (D03)
17:21	21 16:41 (D04)			19:29	20:02	19:43 (D02)
31 07:20	16:21 (D04)			06:54		19:43 (D02)
17:22	19 16:40 (D04)			19:30		19:44 (D02)
Potential sun hours	298		297	369	398	448
Total, worst case	600	35		760		614
Sun reduction	0.45	0.62		0.82		0.92
Oper. time red.	1.00	1.00		1.00		1.00
Wind dir. red.	0.88	0.88		0.60		0.52
Total reduction	0.42	0.57		0.52		0.51
Total, real	250	20		393		311

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)

SHADOW - Calendar

Shadow receptor: 5 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (5)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 0.45 0.62 0.73 0.82 0.92 0.94 0.97 0.96 0.93 0.84 0.61 0.47

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
	23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July	August	September	October	November	December
1	05:40	06:04	19:31 (D02)	06:34	18:44 (D03)	07:04
	20:44	20:25	27	19:58 (D02)	19:43	28
2	05:40	06:05	19:31 (D02)	06:35	18:45 (D03)	07:05
	20:44	20:24	27	19:58 (D02)	19:41	25
3	05:41	06:05	19:31 (D02)	06:36	18:47 (D03)	07:06
	20:43	20:23	27	19:58 (D02)	19:40	20
4	05:41	06:06	19:31 (D02)	06:37	18:49 (D03)	07:07
	20:43	20:22	26	19:57 (D02)	19:38	15
5	05:42	06:07	19:31 (D02)	06:38	18:49 (D03)	07:08
	20:43	20:21	26	19:57 (D02)	19:36	
6	05:42	06:08	19:32 (D02)	06:39	18:44	07:09
	20:43	20:20	24	19:56 (D02)	19:35	
7	05:43	06:09	19:32 (D02)	06:40	18:44	07:10
	20:43	20:19	23	19:55 (D02)	19:33	
8	05:44	06:10	19:00 (D03)	06:41	18:43	07:11
	20:42	20:17	30	19:54 (D02)	19:31	
9	05:44	06:11	18:57 (D03)	06:42	18:41	07:12
	20:42	20:16	34	19:53 (D02)	19:30	
10	05:45	06:12	18:54 (D03)	06:43	18:39	07:13
	20:42	20:15	36	19:51 (D02)	19:28	
11	05:46	06:13	18:52 (D03)	06:44	18:38	07:14
	20:41	20:14	38	19:50 (D02)	19:26	
12	05:46	06:14	18:51 (D03)	06:45	18:36	07:15
	20:41	20:12	37	19:49 (D02)	19:25	
13	05:47	06:15	18:49 (D03)	06:46	18:35	07:16
	20:40	20:11	28	19:17 (D03)	19:23	
14	05:48	06:16	18:47 (D03)	06:47	18:33	07:17
	20:40	20:10	31	19:18 (D03)	19:21	
15	05:49	06:17	18:46 (D03)	06:48	18:32	07:19
	20:39	20:08	33	19:19 (D03)	19:20	
16	05:49	06:18	18:45 (D03)	06:49	18:30	07:20
	20:39	20:07	34	19:19 (D03)	19:18	
17	05:50	06:19	18:45 (D03)	06:50	18:28	07:21
	20:38	20:06	35	19:20 (D03)	19:16	
18	05:51	19:42 (D02)	06:20	18:44 (D03)	06:51	07:22
	20:37	4	19:46 (D02)	20:04	18:25	07:23
19	05:52	19:39 (D02)	06:21	18:43 (D03)	06:52	07:24
	20:37	10	19:49 (D02)	20:03	18:24	07:25
20	05:53	19:38 (D02)	06:22	18:43 (D03)	06:53	07:26
	20:36	13	19:51 (D02)	20:01	18:24	07:27
21	05:54	19:37 (D02)	06:23	19:21 (D03)	19:11	07:28
	20:35	16	19:53 (D02)	20:00	18:22	07:29
22	05:54	19:35 (D02)	06:24	19:21 (D03)	19:10	07:30
	20:35	18	19:53 (D02)	19:58	18:21	07:31
23	05:55	19:35 (D02)	06:25	19:20 (D03)	19:08	07:32
	20:34	19	19:54 (D02)	19:57	18:20	07:33
24	05:56	19:34 (D02)	06:26	19:20 (D03)	19:06	07:34
	20:33	21	19:55 (D02)	19:55	18:18	07:35
25	05:57	19:33 (D02)	06:27	19:20 (D03)	19:04	07:36
	20:32	23	19:56 (D02)	19:54	18:19	07:37
26	05:58	19:33 (D02)	06:28	19:20 (D03)	19:03	07:38
	20:31	23	19:56 (D02)	19:52	18:20	07:39
27	05:59	19:33 (D02)	06:29	19:19 (D03)	19:01	07:40
	20:30	24	19:57 (D02)	19:51	18:21	07:41
28	06:00	19:32 (D02)	06:30	19:42 (D03)	07:01	07:42
	20:29	25	19:57 (D02)	19:49	18:22	07:43
29	06:01	19:31 (D02)	06:31	19:42 (D03)	07:02	07:44
	20:28	26	19:57 (D02)	19:48	18:23	07:45
30	06:02	19:31 (D02)	06:32	19:43 (D03)	07:03	07:46
	20:27	26	19:57 (D02)	19:46	18:24	07:47
31	06:03	19:31 (D02)	06:33	19:15 (D03)	18:54	07:48
	20:26	26	19:57 (D02)	19:45	18:25	07:49
Potential sun hours	458	428	375	346	298	288
Total, worst case	274	1024	88	528		111
Sun reduction	0.97	0.96	0.93	0.61		0.47
Oper. time red.	1.00	1.00	1.00	1.00		1.00
Wind dir. red.	0.51	0.58	0.60	0.88		0.88
Total reduction	0.52	0.58	0.59	0.57		0.44
Total, real	143	598	52	299		48

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

SHADOW - Calendar

Shadow receptor: 6 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (6)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 0.45 0.62 0.73 0.82 0.92 0.94 0.97 0.96 0.93 0.84 0.61 0.47

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
	23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March	April	May	June
1	07:32	16:08 (D04)	07:19	16:24 (D04)	06:43	06:52
	16:50	16:24 (D04)	17:23	5 16:29 (D04)	17:57	19:31
2	07:33	16:08 (D04)	07:18		06:41	06:51
	16:50	16:25 (D04)	17:25		17:58	19:32
3	07:33	16:08 (D04)	07:17		06:40	06:49
	16:51	16:26 (D04)	17:26		18:00	19:33
4	07:33	16:08 (D04)	07:16		06:38	06:48
	16:52	16:27 (D04)	17:27		18:01	19:34
5	07:33	16:08 (D04)	07:15		06:37	06:46
	16:53	16:28 (D04)	17:28		18:02	19:35
6	07:33	16:08 (D04)	07:14		06:35	06:44
	16:54	16:29 (D04)	17:30		18:03	19:36
7	07:33	16:08 (D04)	07:13		06:34	06:43
	16:55	16:30 (D04)	17:31		18:04	19:37
8	07:32	16:07 (D04)	07:12		06:32	06:41
	16:56	16:30 (D04)	17:32		19:05	19:39
9	07:32	16:08 (D04)	07:10		07:30	06:39
	16:57	16:31 (D04)	17:33		19:06	19:40
10	07:32	16:08 (D04)	07:09		07:29	06:38
	16:58	16:32 (D04)	17:35		19:07	19:41
11	07:32	16:08 (D04)	07:08		07:27	06:36
	16:59	16:33 (D04)	17:36		19:09	19:42
12	07:32	16:08 (D04)	07:07		07:26	06:35
	17:00	16:33 (D04)	17:37		19:10	19:43
13	07:31	16:08 (D04)	07:06		07:24	06:33
	17:01	16:34 (D04)	17:38		19:11	19:44
14	07:31	16:08 (D04)	07:04		07:22	06:32
	17:02	16:34 (D04)	17:39		19:12	19:45
15	07:31	16:08 (D04)	07:03		07:21	06:30
	17:03	16:35 (D04)	17:41		19:13	19:46
16	07:30	16:08 (D04)	07:02		07:19	06:28
	17:04	16:35 (D04)	17:42		19:14	19:47
17	07:30	16:09 (D04)	07:00		07:17	06:27
	17:05	16:36 (D04)	17:43		19:15	19:48
18	07:29	16:08 (D04)	06:59		07:16	06:25
	17:07	16:36 (D04)	17:44		19:16	19:49
19	07:29	16:09 (D04)	06:58		07:14	06:24
	17:08	16:37 (D04)	17:46		19:17	19:50
20	07:28	16:09 (D04)	06:56		07:12	06:22
	17:09	16:37 (D04)	17:47		19:18	19:51
21	07:28	16:10 (D04)	06:55		07:11	06:21
	17:10	16:38 (D04)	17:48		19:19	19:52
22	07:27	16:10 (D04)	06:53		07:09	06:19
	17:11	16:38 (D04)	17:49		19:21	19:53
23	07:26	16:11 (D04)	06:52		07:07	06:18
	17:12	16:37 (D04)	17:50		19:22	19:54
24	07:26	16:11 (D04)	06:50		07:06	06:17
	17:14	16:37 (D04)	17:51		19:23	19:55
25	07:25	16:13 (D04)	06:49		07:04	06:15
	17:15	16:38 (D04)	17:53		19:24	19:56
26	07:24	16:13 (D04)	06:48		07:02	06:14
	17:16	16:37 (D04)	17:54		19:25	19:57
27	07:23	16:14 (D04)	06:46		07:01	06:12
	17:17	16:37 (D04)	17:55		19:26	19:59
28	07:22	16:15 (D04)	06:45		06:59	06:11
	17:18	16:36 (D04)	17:56		19:27	20:00
29	07:22	16:16 (D04)			06:57	06:10
	17:20	16:35 (D04)			19:28	20:01
30	07:21	16:18 (D04)			06:56	06:08
	17:21	16:34 (D04)			19:29	20:02
31	07:20	16:20 (D04)			06:54	
	17:22	16:32 (D04)			19:30	
Potential sun hours	298		297		369	398
Total, worst case	718		5		796	448
Sun reduction	0.45		0.62		0.82	724
Oper. time red.	1.00		1.00		1.00	
Wind dir. red.	0.88		0.88		0.60	
Total reduction	0.42		0.58		0.52	
Total, real	303		3		417	371
					20:31	452

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

Shadow receptor: 6 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (6)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 0.45 0.62 0.73 0.82 0.92 0.94 0.97 0.96 0.93 0.84 0.61 0.47

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
	23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July	August	September	October	November	December
1 05:40		06:04	19:30 (D02)	06:34	18:41 (D03)	07:04
20:44		20:25	28 19:58 (D02)	19:43 29	19:10 (D03)	18:53
2 05:40		06:05	19:30 (D02)	06:35	18:43 (D03)	07:05
20:44		20:24	28 19:58 (D02)	19:41 25	19:08 (D03)	18:51
3 05:41		06:05	19:31 (D02)	06:36	18:44 (D03)	07:06
20:43		20:23	26 19:57 (D02)	19:40 21	19:05 (D03)	18:49
4 05:41		06:06	19:31 (D02)	06:37	18:47 (D03)	07:07
20:43		20:22	26 19:57 (D02)	19:38 15	19:02 (D03)	18:48
5 05:42		06:07	19:31 (D02)	06:38		06:38
20:43		20:21	26 19:57 (D02)	19:36		18:06
6 05:42		06:08	19:01 (D03)	06:39		06:39
20:43		20:20	27 19:56 (D02)	19:35		17:05
7 05:43		06:09	18:56 (D03)	06:40		06:40
20:43		20:19	36 19:55 (D02)	19:33		17:04
8 05:44		06:10	18:53 (D03)	06:41		06:41
20:42		20:17	40 19:54 (D02)	19:31		17:03
9 05:44		06:11	18:51 (D03)	06:42		06:40
20:42		20:16	41 19:53 (D02)	19:30		17:02
10 05:45		06:12	18:49 (D03)	06:43		06:41
20:42		20:15	41 19:51 (D02)	19:28		17:01
11 05:46		06:13	18:48 (D03)	06:44		06:40
20:41		20:14	40 19:50 (D02)	19:26		16:40
12 05:46		06:14	18:47 (D03)	06:45		06:39
20:41		20:12	33 19:45 (D02)	19:25		16:40
13 05:47		06:15	18:44 (D03)	06:46		06:38
20:40		20:11	33 19:17 (D03)	19:23		16:37
14 05:48		06:16	18:43 (D03)	06:47		06:37
20:40		20:10	35 19:18 (D03)	19:21		16:36
15 05:49		06:17	18:43 (D03)	06:48		06:36
20:39		20:08	35 19:18 (D03)	19:20		16:35
16 05:49	19:40 (D02)	06:18	18:42 (D03)	06:49		06:35
20:39	8 19:48 (D02)	20:07	37 19:19 (D03)	19:18		16:34
17 05:50	19:38 (D02)	06:19	18:41 (D03)	06:50		06:34
20:38	11 19:49 (D02)	20:06	38 19:19 (D03)	19:16		16:33
18 05:51	19:37 (D02)	06:20	18:40 (D03)	06:51		06:33
20:37	14 19:51 (D02)	20:04	39 19:19 (D03)	19:15		16:32
19 05:52	19:36 (D02)	06:21	18:40 (D03)	06:52		06:32
20:37	16 19:52 (D02)	20:03	39 19:19 (D03)	19:13		16:31
20 05:53	19:35 (D02)	06:22	18:39 (D03)	06:53		06:31
20:36	19 19:54 (D02)	20:01	40 19:19 (D03)	19:11		16:30
21 05:54	19:34 (D02)	06:23	18:39 (D03)	06:54		06:30
20:35	21 19:55 (D02)	20:00	40 19:19 (D03)	19:10		16:29
22 05:54	19:33 (D02)	06:24	18:39 (D03)	06:55		06:29
20:35	22 19:55 (D02)	19:58	40 19:19 (D03)	19:08		16:28
23 05:55	19:33 (D02)	06:25	18:39 (D03)	06:56		06:28
20:34	22 19:55 (D02)	19:57	40 19:19 (D03)	19:06		16:27
24 05:56	19:32 (D02)	06:26	18:39 (D03)	06:57		06:27
20:33	24 19:56 (D02)	19:55	39 19:18 (D03)	19:04		16:26
25 05:57	19:32 (D02)	06:27	18:39 (D03)	06:58		06:26
20:32	25 19:57 (D02)	19:54	39 19:18 (D03)	19:03		16:25
26 05:58	19:32 (D02)	06:28	18:39 (D03)	06:59		06:25
20:31	25 19:57 (D02)	19:52	38 19:17 (D03)	19:01		16:24
27 05:59	19:31 (D02)	06:29	18:39 (D03)	07:00		06:24
20:30	27 19:58 (D02)	19:51	38 19:17 (D03)	18:59		16:23
28 06:00	19:31 (D02)	06:30	18:39 (D03)	07:01		06:23
20:29	27 19:58 (D02)	19:49	37 19:16 (D03)	18:58		16:22
29 06:01	19:30 (D02)	06:31	18:40 (D03)	07:02		06:22
20:28	27 19:57 (D02)	19:48	35 19:15 (D03)	18:56		16:21
30 06:02	19:30 (D02)	06:32	18:40 (D03)	07:03		06:21
20:27	28 19:58 (D02)	19:46	34 19:14 (D03)	18:54		16:20
31 06:03	19:30 (D02)	06:33	18:41 (D03)			06:20
20:26	28 19:58 (D02)	19:45	31 19:12 (D03)			16:19
Potential sun hours	458	428	375	346	298	288
Total, worst case	344	1099	90		496	436
Sun reduction	0.97	0.96	0.93		0.61	0.47
Oper. time red.	1.00	1.00	1.00		1.00	1.00
Wind dir. red.	0.51	0.58	0.60		0.88	0.88
Total reduction	0.52	0.59	0.59		0.57	0.44
Total, real	180	650	53		283	192

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)

SHADOW - Calendar

Shadow receptor: 7 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (7)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March	April	May	June
1 07:32	16:08 (D04)	07:19	06:43	06:52	06:07	19:20 (D02) 05:39
16:50	16:24 (D04)	17:23	17:57	19:31	20:03	21 19:41 (D02) 20:32
2 07:33	16:07 (D04)	07:18	06:41	06:51	06:06	19:19 (D02) 05:38
16:50	16:25 (D04)	17:25	17:58	19:32	20:04	23 19:42 (D02) 20:33
3 07:33	16:07 (D04)	07:17	06:40	06:49	06:05	19:18 (D02) 05:38
16:51	16:26 (D04)	17:26	18:00	19:33	20:05	24 19:42 (D02) 20:34
4 07:33	16:08 (D04)	07:16	06:38	06:48	18:48 (D03)	06:03 19:17 (D02) 05:38
16:52	16:27 (D04)	17:27	18:01	19:34	14 19:02 (D03)	20:06 26 19:43 (D02) 20:34
5 07:33	16:08 (D04)	07:15	06:37	06:46	18:44 (D03)	06:02 19:17 (D02) 05:37
16:53	16:28 (D04)	17:28	18:02	19:35	20 19:04 (D03)	20:07 26 19:43 (D02) 20:35
6 07:33	16:08 (D04)	07:14	06:35	06:44	18:41 (D03)	06:01 19:17 (D02) 05:37
16:54	16:29 (D04)	17:30	18:03	19:36	25 19:06 (D03)	20:08 26 19:43 (D02) 20:36
7 07:33	16:08 (D04)	07:13	06:34	06:43	18:40 (D03)	06:00 19:17 (D02) 05:37
16:55	16:30 (D04)	17:31	18:04	19:37	28 19:08 (D03)	20:09 27 19:44 (D02) 20:36
8 07:32	16:07 (D04)	07:12	07:32	06:41	18:38 (D03)	05:59 19:17 (D02) 05:36
16:56	16:30 (D04)	17:32	19:05	19:39	30 19:08 (D03)	20:10 27 19:44 (D02) 20:37
9 07:32	16:07 (D04)	07:10	07:30	06:39	18:37 (D03)	05:57 19:17 (D02) 05:36
16:57	16:31 (D04)	17:33	19:06	19:40	33 19:10 (D03)	20:11 27 19:44 (D02) 20:38
10 07:32	16:08 (D04)	07:09	07:29	06:38	18:35 (D03)	05:56 19:16 (D02) 05:36
16:58	16:32 (D04)	17:35	19:07	19:41	35 19:10 (D03)	20:12 27 19:43 (D02) 20:38
11 07:32	16:08 (D04)	07:08	07:27	06:36	18:34 (D03)	05:55 19:16 (D02) 05:36
16:59	16:33 (D04)	17:36	19:09	19:42	36 19:10 (D03)	20:13 26 19:42 (D02) 20:39
12 07:32	16:07 (D04)	07:07	07:26	06:35	18:34 (D03)	05:54 19:17 (D02) 05:36
17:00	16:33 (D04)	17:37	19:10	19:43	37 19:11 (D03)	20:14 25 19:42 (D02) 20:39
13 07:31	16:08 (D04)	07:06	07:24	06:33	18:33 (D03)	05:53 19:17 (D02) 05:36
17:01	16:34 (D04)	17:38	19:11	19:44	38 19:11 (D03)	20:15 24 19:41 (D02) 20:40
14 07:31	16:08 (D04)	07:04	07:22	06:32	18:33 (D03)	05:52 19:18 (D02) 05:36
17:02	16:34 (D04)	17:39	19:12	19:45	38 19:11 (D03)	20:16 24 19:42 (D02) 20:40
15 07:31	16:08 (D04)	07:03	07:21	06:30	18:32 (D03)	05:51 19:19 (D02) 05:36
17:03	16:35 (D04)	17:41	19:13	19:46	39 19:11 (D03)	20:17 22 19:41 (D02) 20:41
16 07:30	16:08 (D04)	07:02	07:19	06:28	18:32 (D03)	05:50 19:21 (D02) 05:36
17:04	16:35 (D04)	17:42	19:14	19:47	39 19:11 (D03)	20:18 20 19:40 (D02) 20:41
17 07:30	16:09 (D04)	07:00	07:17	06:27	18:31 (D03)	05:49 19:20 (D02) 05:36
17:05	16:36 (D04)	17:43	19:15	19:48	39 19:10 (D03)	20:19 19 19:39 (D02) 20:41
18 07:29	16:09 (D04)	06:59	07:16	06:25	18:32 (D03)	05:48 19:21 (D02) 05:36
17:07	16:36 (D04)	17:44	19:16	19:49	38 19:10 (D03)	20:20 17 19:38 (D02) 20:42
19 07:29	16:10 (D04)	06:58	07:14	06:24	18:31 (D03)	05:47 19:22 (D02) 05:36
17:08	16:36 (D04)	17:46	19:17	19:50	38 19:09 (D03)	20:21 15 19:37 (D02) 20:42
20 07:28	16:10 (D04)	06:56	07:12	06:22	18:32 (D03)	05:47 19:24 (D02) 05:36
17:09	16:36 (D04)	17:47	19:18	19:51	37 19:09 (D03)	20:22 11 19:35 (D02) 20:42
21 07:28	16:11 (D04)	06:55	07:11	06:21	18:32 (D03)	05:46 19:27 (D02) 05:36
17:10	16:37 (D04)	17:48	19:19	19:52	36 19:08 (D03)	20:23 6 19:33 (D02) 20:43
22 07:27	16:11 (D04)	06:53	07:09	06:19	18:33 (D03)	05:45 05:36
17:11	16:37 (D04)	17:49	19:21	19:53	34 19:07 (D03)	20:24 20:43
23 07:26	16:11 (D04)	06:52	07:07	06:18	18:33 (D03)	05:44 05:37
17:12	16:37 (D04)	17:50	19:22	19:54	33 19:06 (D03)	20:25 20:43
24 07:26	16:12 (D04)	06:50	07:06	06:17	18:34 (D03)	05:43 05:37
17:14	16:36 (D04)	17:51	19:23	19:55	31 19:05 (D03)	20:26 20:43
25 07:25	16:13 (D04)	06:49	07:04	06:15	18:35 (D03)	05:43 05:37
17:15	16:37 (D04)	17:53	19:24	19:56	30 19:05 (D03)	20:26 20:43
26 07:24	16:14 (D04)	06:48	07:02	06:14	18:35 (D03)	05:42 05:38
17:16	16:36 (D04)	17:54	19:25	19:57	28 19:03 (D03)	20:27 20:44
27 07:23	16:15 (D04)	06:46	07:01	06:12	18:37 (D03)	05:41 05:38
17:17	16:35 (D04)	17:55	19:26	19:59	26 19:32 (D02)	20:28 20:44
28 07:22	16:16 (D04)	06:45	06:59	06:11	18:39 (D03)	05:41 05:38
17:18	16:34 (D04)	17:56	19:27	20:00	33 19:37 (D02)	20:29 20:44
29 07:22	16:18 (D04)	06:57	06:10	18:40 (D03)	05:40 05:39	
17:20	16:33 (D04)	19:28	20:01	33 19:38 (D02)	20:30 20:44	
30 07:21	16:20 (D04)	06:56	06:08	18:44 (D03)	05:40 05:39	
17:21	16:31 (D04)	19:29	20:02	27 19:39 (D02)	20:31 20:44	
31 07:20	16:24 (D04)	06:54			05:39	
17:22	3 16:27 (D04)	19:30			20:31	
Potential sun hours	298	297	369	398	448	452
Total, worst case	684			875	463	
Sun reduction	0.45			0.82	0.92	
Oper. time red.	1.00			1.00	1.00	
Wind dir. red.	0.88			0.62	0.52	
Total reduction	0.42			0.54	0.50	
Total, real	288			468	234	

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)
Sun set (hh:mm)						

SHADOW - Calendar

Shadow receptor: 7 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (7)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 0.45 0.62 0.73 0.82 0.92 0.94 0.97 0.96 0.93 0.84 0.61 0.47

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
	23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July	August	September	October	November	December
1	05:40	06:04	19:27 (D02)	06:34	18:33 (D03)	07:04
	20:44	20:25	26 19:53 (D02)	19:43	36 19:09 (D03)	18:53
2	05:40	06:05	19:27 (D02)	06:35	18:33 (D03)	07:05
	20:44	20:24	26 19:53 (D02)	19:41	35 19:08 (D03)	18:51
3	05:41	06:05	19:27 (D02)	06:36	18:34 (D03)	07:06
	20:43	20:23	26 19:53 (D02)	19:40	33 19:07 (D03)	18:49
4	05:41	06:06	19:26 (D02)	06:37	18:35 (D03)	07:07
	20:43	20:22	27 19:53 (D02)	19:38	30 19:05 (D03)	18:48
5	05:42	06:07	19:26 (D02)	06:38	18:36 (D03)	07:08
	20:43	20:21	27 19:53 (D02)	19:36	28 19:04 (D03)	18:46
6	05:42	06:08	19:26 (D02)	06:39	18:37 (D03)	07:09
	20:43	20:20	27 19:53 (D02)	19:35	25 19:02 (D03)	18:44
7	05:43	06:09	19:27 (D02)	06:40	18:39 (D03)	07:10
	20:43	20:19	26 19:53 (D02)	19:33	21 19:00 (D03)	18:43
8	05:44	06:10	19:27 (D02)	06:41	18:41 (D03)	07:11
	20:42	20:17	26 19:53 (D02)	19:31	15 18:56 (D03)	18:41
9	05:44	06:11	19:27 (D02)	06:42	07:12	06:47
	20:42	20:16	25 19:52 (D02)	19:30	18:39	16:57
10	05:45	06:12	19:28 (D02)	06:43	07:13	06:48
	20:42	20:15	23 19:51 (D02)	19:28	18:38	16:56
11	05:46	06:13	19:28 (D02)	06:44	07:14	06:50
	20:41	20:14	22 19:50 (D02)	19:26	18:36	16:55
12	05:46	06:14	19:29 (D02)	06:45	07:15	06:51
	20:41	20:12	20 19:49 (D02)	19:25	18:35	16:54
13	05:47	06:15	18:51 (D03)	06:46	07:16	06:52
	20:40	20:11	29 19:47 (D02)	19:23	18:33	16:53
14	05:48	06:16	18:47 (D03)	06:47	07:17	06:53
	20:40	20:10	33 19:46 (D02)	19:21	18:32	16:52
15	05:49	06:17	18:45 (D03)	06:48	07:19	06:54
	20:39	20:08	32 19:43 (D02)	19:20	18:30	16:51
16	05:49	06:18	18:43 (D03)	06:49	07:20	06:56
	20:39	20:07	25 19:08 (D03)	19:18	18:28	16:50
17	05:50	06:19	18:42 (D03)	06:50	07:21	06:57
	20:38	20:06	28 19:10 (D03)	19:16	18:27	16:49
18	05:51	06:20	18:40 (D03)	06:51	07:22	06:58
	20:37	20:04	31 19:11 (D03)	19:15	18:25	16:48
19	05:52	06:21	18:39 (D03)	06:52	07:23	06:59
	20:37	20:03	32 19:11 (D03)	19:13	18:24	16:48
20	05:53	06:22	18:38 (D03)	06:53	07:24	07:00
	20:36	20:01	34 19:12 (D03)	19:11	18:22	16:47
21	05:54	06:23	18:37 (D03)	06:54	07:25	07:01
	20:35	20:00	35 19:12 (D03)	19:10	18:21	16:46
22	05:54	06:24	18:37 (D03)	06:55	07:26	07:03
	20:35	19:58	36 19:13 (D03)	19:08	18:20	16:46
23	05:55	19:35 (D02)	06:25	18:36 (D03)	06:56	07:27
	20:34	9 19:44 (D02)	19:57	37 19:13 (D03)	19:06	07:04
24	05:56	19:34 (D02)	06:26	18:35 (D03)	06:57	07:29
	20:33	12 19:46 (D02)	19:55	38 19:13 (D03)	19:04	07:05
25	05:57	19:32 (D02)	06:27	18:35 (D03)	06:58	07:30
	20:32	16 19:48 (D02)	19:54	38 19:13 (D03)	19:03	07:06
26	05:58	19:31 (D02)	06:28	18:34 (D03)	06:59	07:31
	20:31	18 19:49 (D02)	19:52	39 19:13 (D03)	19:01	07:07
27	05:59	19:31 (D02)	06:29	18:34 (D03)	07:00	07:32
	20:30	19 19:50 (D02)	19:51	39 19:13 (D03)	18:59	07:08
28	06:00	19:30 (D02)	06:30	18:34 (D03)	07:01	07:33
	20:29	21 19:51 (D02)	19:49	38 19:12 (D03)	18:58	07:09
29	06:01	19:28 (D02)	06:31	18:34 (D03)	07:02	07:34
	20:28	23 19:51 (D02)	19:48	38 19:12 (D03)	18:56	07:10
30	06:02	19:28 (D02)	06:32	18:34 (D03)	07:03	07:35
	20:27	24 19:52 (D02)	19:46	37 19:11 (D03)	18:54	07:11
31	06:03	19:27 (D02)	06:33	18:34 (D03)	07:04	07:37
	20:26	25 19:52 (D02)	19:45	37 19:11 (D03)	18:07	07:32
Potential sun hours	458	428	375	346	298	288
Total, worst case	167	957	223		454	475
Sun reduction	0.97	0.96	0.93		0.61	0.47
Oper. time red.	1.00	1.00	1.00		1.00	1.00
Wind dir. red.	0.52	0.58	0.62		0.88	0.88
Total reduction	0.53	0.59	0.61		0.57	0.44
Total, real	89	569	137		259	209

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)
	Sun set (hh:mm)					

SHADOW - Calendar

Shadow receptor: 11 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (11)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March	April	May	June	
1	07:32	07:19	16:24 (D04)	06:43	06:52	06:07	19:20 (D02) 05:39
	16:50	17:23	13 16:37 (D04)	17:57	19:31	20:03	19:41 (D02) 20:32
2	07:33	07:18	16:27 (D04)	06:41	06:51	06:06	19:20 (D02) 05:38
	16:50	17:25	8 16:35 (D04)	17:58	19:32	20:04	19:42 (D02) 20:33
3	07:33	16:21 (D04)	07:17	06:40	06:49	06:05	19:18 (D02) 05:38
	16:51	2 16:23 (D04)	17:26	18:00	19:33	20:05	19:42 (D02) 20:34
4	07:33	16:19 (D04)	07:16	06:38	06:48	18:52 (D03)	06:03 19:18 (D02) 05:38
	16:52	7 16:26 (D04)	17:27	18:01	19:34	11 19:03 (D03)	20:06 19:43 (D02) 20:34
5	07:33	16:18 (D04)	07:15	06:37	06:46	18:48 (D03)	06:02 19:18 (D02) 05:37
	16:53	10 16:28 (D04)	17:28	18:02	19:35	18 19:05 (D03)	20:07 19:43 (D02) 20:35
6	07:33	16:17 (D04)	07:14	06:35	06:44	18:45 (D03)	06:01 19:18 (D02) 05:37
	16:54	12 16:29 (D04)	17:30	18:03	19:36	23 19:08 (D03)	20:08 19:44 (D02) 20:36
7	07:33	16:17 (D04)	07:13	06:34	06:43	18:43 (D03)	06:00 19:18 (D02) 05:37
	16:55	13 16:30 (D04)	17:31	18:04	19:37	27 19:10 (D03)	20:09 19:44 (D02) 20:36
8	07:32	16:16 (D04)	07:12	07:32	06:41	18:41 (D03)	05:59 19:18 (D02) 05:36
	16:56	15 16:31 (D04)	17:32	19:05	19:38	29 19:10 (D03)	20:10 19:44 (D02) 20:37
9	07:32	16:16 (D04)	07:10	07:30	06:39	18:41 (D03)	05:57 19:18 (D02) 05:36
	16:57	16 16:32 (D04)	17:33	19:06	19:40	31 19:12 (D03)	20:11 19:43 (D02) 20:38
10	07:32	16:16 (D04)	07:09	07:29	06:38	18:39 (D03)	05:56 19:17 (D02) 05:36
	16:58	17 16:33 (D04)	17:35	19:07	19:41	33 19:12 (D03)	20:12 19:42 (D02) 20:38
11	07:32	16:16 (D04)	07:08	07:27	06:36	18:38 (D03)	05:55 19:18 (D02) 05:36
	16:59	19 16:35 (D04)	17:36	19:09	19:42	34 19:12 (D03)	20:13 19:42 (D02) 20:39
12	07:32	16:15 (D04)	07:07	07:26	06:35	18:37 (D03)	05:54 19:18 (D02) 05:36
	17:00	20 16:35 (D04)	17:37	19:10	19:43	36 19:13 (D03)	20:14 19:41 (D02) 20:39
13	07:31	16:15 (D04)	07:06	07:24	06:33	18:36 (D03)	05:53 19:19 (D02) 05:36
	17:01	21 16:36 (D04)	17:38	19:11	19:44	36 19:12 (D03)	20:15 19:41 (D02) 20:40
14	07:31	16:14 (D04)	07:04	07:22	06:32	18:36 (D03)	05:52 19:20 (D02) 05:36
	17:02	23 16:37 (D04)	17:39	19:12	19:45	37 19:13 (D03)	20:16 19:41 (D02) 20:40
15	07:31	16:15 (D04)	07:03	07:21	06:30	18:36 (D03)	05:51 19:21 (D02) 05:36
	17:03	23 16:38 (D04)	17:41	19:13	19:46	36 19:12 (D03)	20:17 19:40 (D02) 20:41
16	07:30	16:14 (D04)	07:02	07:19	06:28	18:33 (D03)	05:50 19:22 (D02) 05:36
	17:04	24 16:38 (D04)	17:42	19:14	19:47	37 19:13 (D03)	20:18 19:39 (D02) 20:41
17	07:30	16:15 (D04)	07:00	07:17	06:27	18:35 (D03)	05:49 19:23 (D02) 05:36
	17:05	25 16:40 (D04)	17:43	19:15	19:48	37 19:12 (D03)	20:19 19:37 (D02) 20:41
18	07:29	16:14 (D04)	06:59	07:16	06:25	18:36 (D03)	05:48 19:25 (D02) 05:36
	17:07	26 16:40 (D04)	17:44	19:16	19:49	36 19:12 (D03)	20:20 19:36 (D02) 20:42
19	07:29	16:15 (D04)	06:58	07:14	06:24	18:35 (D03)	05:47 19:27 (D02) 05:36
	17:08	26 16:41 (D04)	17:46	19:17	19:50	36 19:11 (D03)	20:21 19:33 (D02) 20:42
20	07:28	16:15 (D04)	06:56	07:12	06:22	18:36 (D03)	05:47 05:36
	17:09	26 16:41 (D04)	17:47	19:18	19:51	35 19:11 (D03)	20:22 20:42
21	07:28	16:16 (D04)	06:55	07:11	06:21	18:36 (D03)	05:46 05:36
	17:10	26 16:42 (D04)	17:48	19:19	19:52	33 19:09 (D03)	20:23 20:43
22	07:27	16:16 (D04)	06:53	07:09	06:19	18:37 (D03)	05:45 05:36
	17:11	26 16:42 (D04)	17:49	19:21	19:53	32 19:09 (D03)	20:24 20:43
23	07:26	16:16 (D04)	06:52	07:07	06:18	18:37 (D03)	05:44 05:37
	17:12	26 16:42 (D04)	17:50	19:22	19:54	30 19:07 (D03)	20:25 20:43
24	07:26	16:16 (D04)	06:50	07:06	06:17	18:38 (D03)	05:43 05:37
	17:14	26 16:42 (D04)	17:51	19:23	19:55	29 19:07 (D03)	20:26 20:43
25	07:25	16:17 (D04)	06:49	07:04	06:15	18:39 (D03)	05:43 05:37
	17:15	26 16:43 (D04)	17:53	19:24	19:56	27 19:06 (D03)	20:26 20:43
26	07:24	16:18 (D04)	06:48	07:02	06:14	18:40 (D03)	05:42 05:38
	17:16	24 16:42 (D04)	17:54	19:25	19:57	23 19:03 (D03)	20:27 20:44
27	07:23	16:18 (D04)	06:46	07:01	06:12	18:42 (D03)	05:41 05:38
	17:17	24 16:42 (D04)	17:55	19:26	19:59	29 19:36 (D02)	20:28 20:44
28	07:22	16:19 (D04)	06:45	06:59	06:11	18:44 (D03)	05:41 05:38
	17:18	22 16:41 (D04)	17:56	19:27	20:00	30 19:38 (D02)	20:29 20:44
29	07:22	16:20 (D04)		06:57	06:10	18:47 (D03)	05:40 05:39
	17:20	21 16:41 (D04)		19:28	20:01	24 19:38 (D02)	20:30 20:44
30	07:21	16:21 (D04)		06:56	06:08	19:21 (D02)	05:40 05:39
	17:21	19 16:40 (D04)		19:29	20:02	18 19:39 (D02)	20:31 20:44
31	07:20	16:22 (D04)		06:54			05:39
	17:22	17 16:39 (D04)		19:30			20:31
				369	398	448	452
Potential sun hours	298	297					
Total, worst case	582	21			807	402	
Sun reduction	0.45	0.62			0.82	0.92	
Oper. time red.	1.00	1.00			1.00	1.00	
Wind dir. red.	0.88	0.88			0.61	0.52	
Total reduction	0.42	0.57			0.53	0.50	
Total, real	242	12			426	202	

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

SHADOW - Calendar

Shadow receptor: 11 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (11)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July		August		September		October		November		December					
1	05:40		06:04		19:28 (D02)	06:34	18:37 (D03)	07:04	06:38		07:12		15:58 (D04)			
	20:44		20:25	24	19:52 (D02)	19:43	34	19:11 (D03)	18:53	18:06	16:41	19	16:17 (D04)			
2	05:40		06:05		19:28 (D02)	06:35	18:37 (D03)	07:05	06:39		07:13		15:59 (D04)			
	20:44		20:24	25	19:53 (D02)	19:41	33	19:10 (D03)	18:51	17:05	16:41	17	16:16 (D04)			
3	05:41		06:05		19:28 (D02)	06:36	18:38 (D03)	07:06	06:40		07:14		16:00 (D04)			
	20:43		20:23	25	19:53 (D02)	19:40	31	19:09 (D03)	18:49	17:04	16:41	16	16:16 (D04)			
4	05:41		06:06		19:27 (D02)	06:37	18:38 (D03)	07:07	06:41		07:15		16:01 (D04)			
	20:43		20:22	26	19:53 (D02)	19:38	29	19:07 (D03)	18:48	17:02	16:40	15	16:16 (D04)			
5	05:42		06:07		19:27 (D02)	06:38	18:39 (D03)	07:08	06:43		07:16		16:02 (D04)			
	20:43		20:21	26	19:53 (D02)	19:36	27	19:06 (D03)	18:46	17:01	16:40	13	16:15 (D04)			
6	05:42		06:08		19:27 (D02)	06:39	18:41 (D03)	07:09	06:44		07:17		16:03 (D04)			
	20:43		20:20	26	19:53 (D02)	19:35	23	19:04 (D03)	18:44	17:00	16:40	12	16:15 (D04)			
7	05:43		06:09		19:27 (D02)	06:40	18:43 (D03)	07:10	06:45		07:18		16:05 (D04)			
	20:43		20:19	26	19:53 (D02)	19:33	18	19:01 (D03)	18:43	16:59	16:40	10	16:15 (D04)			
8	05:44		06:10		19:27 (D02)	06:41	18:46 (D03)	07:11	06:46		07:19		16:06 (D04)			
	20:42		20:17	26	19:53 (D02)	19:31	12	18:58 (D03)	18:41	16:58	16:40	7	16:13 (D04)			
9	05:44		06:11		19:28 (D02)	06:42		07:12	06:47		15:58 (D04)	07:20			16:08 (D04)	
	20:42		20:16	25	19:53 (D02)	19:30		18:39	16:57	8	16:06 (D04)	16:40	3	16:11 (D04)		
10	05:45		06:12		19:28 (D02)	06:43		07:13	06:48		15:55 (D04)	07:21				
	20:42		20:15	23	19:51 (D02)	19:28		18:38	16:56	14	16:09 (D04)	16:40				
11	05:46		06:13		19:28 (D02)	06:44		07:14	06:50		15:54 (D04)	07:22				
	20:41		20:14	22	19:50 (D02)	19:26		18:36	16:55	17	16:11 (D04)	16:40				
12	05:46		06:14		19:29 (D02)	06:45		07:15	06:51		15:53 (D04)	07:23				
	20:41		20:12	20	19:49 (D02)	19:25		18:35	16:54	19	16:12 (D04)	16:40				
13	05:47		06:15		19:29 (D02)	06:46		07:16	06:52		15:52 (D04)	07:23				
	20:40		20:11	18	19:47 (D02)	19:23		18:33	16:53	21	16:13 (D04)	16:40				
14	05:48		06:16		18:54 (D03)	06:47		07:17	06:53		15:51 (D04)	07:24				
	20:40		20:10	26	19:46 (D02)	19:21		18:32	16:52	22	16:13 (D04)	16:40				
15	05:49		06:17		18:50 (D03)	06:48		07:19	06:54		15:51 (D04)	07:25				
	20:39		20:08	29	19:44 (D02)	19:20		18:30	16:51	24	16:15 (D04)	16:41				
16	05:49		06:18		18:48 (D03)	06:49		07:20	06:56		15:51 (D04)	07:26				
	20:39		20:07	29	19:42 (D02)	19:18		18:28	16:50	24	16:15 (D04)	16:41				
17	05:50		06:19		18:46 (D03)	06:50		07:21	06:57		15:50 (D04)	07:26				
	20:38		20:06	24	19:10 (D03)	19:16		18:27	16:49	26	16:16 (D04)	16:41				
18	05:51		06:20		18:45 (D03)	06:51		07:22	06:58		15:50 (D04)	07:27				
	20:37		20:04	27	19:12 (D03)	19:15		18:25	16:48	26	16:16 (D04)	16:41				
19	05:52		06:21		18:44 (D03)	06:52		07:23	06:59		15:51 (D04)	07:28				
	20:37		20:03	29	19:13 (D03)	19:13		18:24	16:48	26	16:17 (D04)	16:42				
20	05:53		06:22		18:42 (D03)	06:53		07:24	07:00		15:51 (D04)	07:28				
	20:36		20:01	31	19:13 (D03)	19:11		18:22	16:47	26	16:17 (D04)	16:42				
21	05:54		06:23		18:41 (D03)	06:54		07:25	07:01		15:51 (D04)	07:29				
	20:35		20:00	33	19:14 (D03)	19:10		18:21	16:46	26	16:17 (D04)	16:43				
22	05:54		06:24		18:40 (D03)	06:55		07:26	07:03		15:51 (D04)	07:29				
	20:29		19:58	34	19:14 (D03)	19:08		18:20	16:46	26	16:17 (D04)	16:43				
23	05:55		06:25		18:40 (D03)	06:56		07:27	07:04		15:51 (D04)	07:30				
	20:34		19:57	35	19:15 (D03)	19:06		18:18	16:45	26	16:17 (D04)	16:43				
24	05:56		06:26		18:39 (D03)	06:57		07:29	07:05		15:52 (D04)	07:30				
	20:33		19:55	36	19:15 (D03)	19:04		18:17	16:44	26	16:18 (D04)	16:44				
25	05:57	19:36 (D02)	06:27		18:38 (D03)	06:58		07:30	07:06		15:53 (D04)	07:31				
	20:32	9	19:45 (D02)	19:54	37	19:15 (D03)	19:03		18:15	16:44	25	16:18 (D04)	16:45			
26	05:58		19:35 (D02)	06:28		18:38 (D03)	06:59		07:31	07:07		15:53 (D04)	07:31			
	20:31	12	19:47 (D02)	19:52	37	19:15 (D03)	19:01		18:14	16:43	24	16:17 (D04)	16:45			
27	05:59		19:33 (D02)	06:29		18:38 (D03)	07:00		07:32	07:08		15:54 (D04)	07:31			
	20:30	16	19:49 (D02)	19:51	37	19:15 (D03)	18:59		18:13	16:43	23	16:17 (D04)	16:46			
28	06:00		19:32 (D02)	06:30		18:37 (D03)	07:01		07:33	07:09		15:54 (D04)	07:32			
	20:29	18	19:50 (D02)	19:49	37	19:14 (D03)	18:58		18:11	16:42	23	16:17 (D04)	16:46			
29	06:01		19:30 (D02)	06:31		18:37 (D03)	07:02		07:34	07:10		15:55 (D04)	07:32			
	20:28	20	19:50 (D02)	19:48	37	19:14 (D03)	18:56		18:10	16:42	22	16:17 (D04)	16:47			
30	06:02		19:30 (D02)	06:32		18:37 (D03)	07:03		07:35	07:11		15:56 (D04)	07:32			
	20:27	21	19:51 (D02)	19:46	36	19:13 (D03)	18:54		18:09	16:42	20	16:16 (D04)	16:48			
31	06:03		19:29 (D02)	06:33		18:37 (D03)			07:37				07:32			
	20:26	23	19:52 (D02)	19:45	36	19:13 (D03)			18:07				16:49			
									346	298			288			
	Potential sun hours	458			428		375									
	Total, worst case	119			902		207									
	Sun reduction	0.97			0.96		0.93									
	Oper. time red.	1.00			1.00		1.00									
	Wind dir. red.	0.52			0.58		0.62									
	Total reduction	0.53			0.59		0.61									
	Total, real	63			529		125									

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)

SHADOW - Calendar

Shadow receptor: 12 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (12)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March	April	May	June	
1	07:32		07:19	16:26 (D04)	06:43	06:52	06:07
	16:50		17:23	9 16:35 (D04)	17:57	19:31	19:17 (D02) 05:39
2	07:33	16:19 (D04)	07:18	06:41	06:51	18:50 (D03)	19:41 (D02) 20:32
	16:50	4 16:23 (D04)	17:25	17:58	19:32	19:01 (D03) 06:06	19:17 (D02) 05:38
3	07:33	16:17 (D04)	07:17	06:40	06:49	18:46 (D03)	19:15 (D02) 05:38
	16:51	8 16:25 (D04)	17:26	18:00	19:33	19:04 (D03) 06:05	19:41 (D02) 20:34
4	07:33	16:17 (D04)	07:16	06:38	06:48	18:44 (D03) 06:03	19:15 (D02) 05:38
	16:52	10 16:27 (D04)	17:27	18:01	19:34	19:07 (D03) 06:02	19:41 (D02) 20:34
5	07:33	16:16 (D04)	07:15	06:37	06:46	18:41 (D03) 06:02	19:15 (D02) 05:37
	16:53	12 16:28 (D04)	17:28	18:02	19:35	19:08 (D03) 06:07	19:41 (D02) 20:35
6	07:33	16:16 (D04)	07:14	06:35	06:44	18:39 (D03) 06:01	19:16 (D02) 05:37
	16:54	13 16:29 (D04)	17:30	18:03	19:36	19:08 (D03) 06:08	19:41 (D02) 20:36
7	07:33	16:16 (D04)	07:13	06:34	06:43	18:39 (D03) 06:00	19:16 (D02) 05:37
	16:55	14 16:30 (D04)	17:31	18:04	19:37	31 19:10 (D03) 06:00	19:41 (D02) 20:36
8	07:32	16:15 (D04)	07:12	07:32	06:41	18:37 (D03) 05:59	19:16 (D02) 05:36
	16:56	16 16:31 (D04)	17:32	19:05	19:38	33 19:10 (D03) 06:02	19:41 (D02) 20:37
9	07:32	16:15 (D04)	07:10	07:30	06:39	18:37 (D03) 05:57	19:17 (D02) 05:36
	16:57	17 16:32 (D04)	17:33	19:06	19:40	34 19:11 (D03) 06:11	19:40 (D02) 20:38
10	07:32	16:15 (D04)	07:09	07:29	06:38	18:36 (D03) 05:56	19:16 (D02) 05:36
	16:58	18 16:33 (D04)	17:35	19:07	19:41	34 19:10 (D03) 06:12	19:39 (D02) 20:38
11	07:32	16:15 (D04)	07:08	07:27	06:36	18:35 (D03) 05:55	19:17 (D02) 05:36
	16:59	20 16:35 (D04)	17:36	19:09	19:42	35 19:10 (D03) 06:13	19:38 (D02) 20:39
12	07:32	16:14 (D04)	07:07	07:26	06:35	18:35 (D03) 05:54	19:18 (D02) 05:36
	17:00	21 16:35 (D04)	17:37	19:10	19:43	36 19:11 (D03) 06:14	19:37 (D02) 20:39
13	07:31	16:14 (D04)	07:06	07:24	06:33	18:34 (D03) 05:53	19:19 (D02) 05:36
	17:01	22 16:36 (D04)	17:38	19:11	19:44	36 19:10 (D03) 06:15	19:36 (D02) 20:40
14	07:31	16:14 (D04)	07:04	07:22	06:32	18:34 (D03) 05:52	19:20 (D02) 05:36
	17:02	23 16:37 (D04)	17:39	19:12	19:45	36 19:10 (D03) 06:16	19:35 (D02) 20:40
15	07:31	16:14 (D04)	07:03	07:21	06:30	18:34 (D03) 05:51	19:23 (D02) 05:36
	17:03	24 16:38 (D04)	17:41	19:13	19:46	35 19:09 (D03) 06:17	19:34 (D02) 20:41
16	07:30	16:14 (D04)	07:02	07:19	06:28	18:34 (D03) 05:50	19:25 (D02) 05:36
	17:04	24 16:38 (D04)	17:42	19:14	19:47	36 19:10 (D03) 06:18	19:31 (D02) 20:41
17	07:30	16:14 (D04)	07:00	07:17	06:27	18:34 (D03) 05:49	19:16 (D02) 05:36
	17:05	25 16:39 (D04)	17:43	19:15	19:48	34 19:08 (D03) 06:19	19:38 (D02) 20:41
18	07:29	16:14 (D04)	06:59	07:16	06:25	18:35 (D03) 05:48	19:17 (D02) 05:36
	17:07	25 16:39 (D04)	17:44	19:16	19:49	33 19:08 (D03) 06:20	20:42
19	07:29	16:15 (D04)	06:58	07:14	06:24	18:34 (D03) 05:47	19:36 (D02) 20:42
	17:08	25 16:40 (D04)	17:46	19:17	19:50	33 19:07 (D03) 06:21	19:20 (D02) 05:36
20	07:28	16:15 (D04)	06:56	07:12	06:22	18:35 (D03) 05:47	19:20 (D02) 05:36
	17:09	25 16:40 (D04)	17:47	19:18	19:51	31 19:06 (D03) 06:22	20:42
21	07:28	16:16 (D04)	06:55	07:11	06:21	18:36 (D03) 05:46	19:23 (D02) 05:36
	17:10	25 16:41 (D04)	17:48	19:19	19:52	29 19:05 (D03) 06:23	20:43
22	07:27	16:16 (D04)	06:53	07:09	06:19	18:37 (D03) 05:45	19:36 (D02) 20:43
	17:11	25 16:41 (D04)	17:49	19:21	19:53	27 19:04 (D03) 06:24	19:43 (D02) 20:43
23	07:26	16:16 (D04)	06:52	07:07	06:18	18:38 (D03) 05:44	19:37 (D02) 20:43
	17:12	25 16:41 (D04)	17:50	19:22	19:54	23 19:01 (D03) 06:25	20:43
24	07:26	16:16 (D04)	06:50	07:06	06:17	18:40 (D03) 05:43	19:37 (D02) 20:43
	17:14	25 16:41 (D04)	17:51	19:23	19:55	20 19:00 (D03) 06:26	20:43
25	07:25	16:17 (D04)	06:49	07:04	06:15	18:42 (D03) 05:43	19:37 (D02) 20:43
	17:15	25 16:42 (D04)	17:53	19:24	19:56	24 19:34 (D02) 06:26	20:43
26	07:24	16:18 (D04)	06:48	07:02	06:14	18:45 (D03) 05:42	19:38 (D02) 20:44
	17:16	23 16:41 (D04)	17:54	19:25	19:57	22 19:35 (D02) 06:27	20:44
27	07:23	16:18 (D04)	06:46	07:01	06:12	19:21 (D02) 05:41	19:38 (D02) 20:44
	17:17	23 16:41 (D04)	17:55	19:26	19:59	16 19:37 (D02) 06:28	20:44
28	07:22	16:19 (D04)	06:45	06:59	06:11	19:20 (D02) 05:41	19:38 (D02) 20:44
	17:18	21 16:40 (D04)	17:56	19:27	20:00	18 19:38 (D02) 06:29	20:44
29	07:22	16:20 (D04)		06:57	06:10	19:18 (D02) 05:40	19:39 (D02) 20:44
	17:20	20 16:40 (D04)		19:28	20:01	20 19:38 (D02) 06:30	20:44
30	07:21	16:22 (D04)		06:56	06:08	19:17 (D02) 05:40	19:39 (D02) 20:44
	17:21	17 16:39 (D04)		19:29	20:02	22 19:39 (D02) 06:31	20:44
31	07:20	16:23 (D04)		06:54		19:30 05:39	
	17:22	14 16:37 (D04)		19:30		20:31 452	
	Potential sun hours	298	297	369	398	448	
	Total, worst case	589	9		806	337	
	Sun reduction	0.45	0.62		0.82	0.92	
	Oper. time red.	1.00	1.00		1.00	1.00	
	Wind dir. red.	0.88	0.88		0.62	0.52	
	Total reduction	0.42	0.57		0.53	0.51	
	Total, real	245	5		428	171	

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

Shadow receptor: 12 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (12)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July		August		September		October		November		December						
1	05:40		06:04		19:28 (D02)	06:34		18:34 (D03)	07:04	06:38		07:12		15:57 (D04)			
	20:44		20:25	20	19:48 (D02)	19:43	35	19:09 (D03)	18:53	18:06		16:41	20	16:17 (D04)			
2	05:40		06:05		19:27 (D02)	06:35		18:34 (D03)	07:05	06:39		07:13		15:58 (D04)			
	20:44		20:24	22	19:49 (D02)	19:41	34	19:08 (D03)	18:51	17:05		16:41	18	16:16 (D04)			
3	05:41		06:05		19:27 (D02)	06:36		18:34 (D03)	07:06	06:40		07:14		15:59 (D04)			
	20:43		20:23	23	19:50 (D02)	19:40	34	19:08 (D03)	18:49	17:04		16:41	17	16:16 (D04)			
4	05:41		06:06		19:26 (D02)	06:37		18:34 (D03)	07:07	06:41		07:15		16:00 (D04)			
	20:43		20:22	24	19:50 (D02)	19:38	33	19:07 (D03)	18:48	17:02		16:40	16	16:16 (D04)			
5	05:42		06:07		19:26 (D02)	06:38		18:35 (D03)	07:08	06:43		07:16		16:01 (D04)			
	20:43		20:21	24	19:50 (D02)	19:36	31	19:06 (D03)	18:46	17:01		16:40	14	16:15 (D04)			
6	05:42		06:08		19:25 (D02)	06:39		18:35 (D03)	07:09	06:44		07:17		16:02 (D04)			
	20:43		20:20	26	19:51 (D02)	19:35	29	19:04 (D03)	18:44	17:00		16:40	13	16:15 (D04)			
7	05:43		06:09		19:25 (D02)	06:40		18:36 (D03)	07:10	06:45		07:18		16:03 (D04)			
	20:43		20:19	26	19:51 (D02)	19:33	27	19:03 (D03)	18:43	16:59		16:40	12	16:15 (D04)			
8	05:44		06:10		19:25 (D02)	06:41		18:38 (D03)	07:11	06:46		07:19		16:04 (D04)			
	20:42		20:17	26	19:51 (D02)	19:31	23	19:01 (D03)	18:41	16:58		16:40	10	16:14 (D04)			
9	05:44		06:11		19:25 (D02)	06:42		18:39 (D03)	07:12	06:47		07:20		16:05 (D04)			
	20:42		20:16	26	19:51 (D02)	19:30	19	18:58 (D03)	18:39	16:57		16:40	8	16:13 (D04)			
10	05:45		06:12		19:25 (D02)	06:43		18:42 (D03)	07:13	06:48	15:56 (D04)	07:21		16:08 (D04)			
	20:42		20:15	26	19:51 (D02)	19:28	13	18:55 (D03)	18:38	16:56	10	16:06 (D04)	16:40	4	16:12 (D04)		
11	05:46		06:13		19:25 (D02)	06:44		07:14		06:50		15:55 (D04)	07:22				
	20:41		20:14	25	19:50 (D02)	19:26		18:36		16:55	14	16:09 (D04)	16:40				
12	05:46		06:14		19:26 (D02)	06:45		07:15		06:51		15:53 (D04)	07:23				
	20:41		20:12	23	19:49 (D02)	19:25		18:35		16:54	18	16:11 (D04)	16:40				
13	05:47		06:15		19:25 (D02)	06:46		07:16		06:52		15:52 (D04)	07:23				
	20:40		20:11	22	19:47 (D02)	19:23		18:33		16:53	20	16:12 (D04)	16:40				
14	05:48		06:16		19:26 (D02)	06:47		07:17		06:53		15:51 (D04)	07:24				
	20:40		20:10	20	19:46 (D02)	19:21		18:32		16:52	21	16:12 (D04)	16:40				
15	05:49		06:17		19:27 (D02)	06:48		07:19		06:54		15:51 (D04)	07:25				
	20:39		20:08	17	19:44 (D02)	19:20		18:30		16:51	23	16:14 (D04)	16:41				
16	05:49		06:18		19:28 (D02)	06:49		07:20		06:56		15:51 (D04)	07:26				
	20:39		20:07	15	19:43 (D02)	19:18		18:28		16:50	23	16:14 (D04)	16:41				
17	05:50		06:19		18:50 (D03)	06:50		07:21		06:57		15:50 (D04)	07:26				
	20:38		20:06	24	19:42 (D02)	19:16		18:27		16:49	25	16:15 (D04)	16:41				
18	05:51		06:20		18:47 (D03)	06:51		07:22		06:58		15:50 (D04)	07:27				
	20:37		20:04	24	19:39 (D02)	19:15		18:25		16:48	25	16:15 (D04)	16:41				
19	05:52		06:21		18:45 (D03)	06:52		07:23		06:59		15:51 (D04)	07:28				
	20:37		20:03	21	19:06 (D03)	19:13		18:24		16:48	25	16:16 (D04)	16:42				
20	05:53		06:22		18:43 (D03)	06:53		07:24		07:00		15:51 (D04)	07:28				
	20:36		20:01	25	19:08 (D03)	19:11		18:22		16:47	25	16:16 (D04)	16:42				
21	05:54		06:23		18:42 (D03)	06:54		07:25		07:01		15:51 (D04)	07:29				
	20:35		20:00	27	19:09 (D03)	19:10		18:21		16:46	25	16:16 (D04)	16:43				
22	05:54		06:24		18:40 (D03)	06:55		07:26		07:03		15:51 (D04)	07:29				
	20:35		19:58	30	19:10 (D03)	19:08		18:20		16:46	25	16:16 (D04)	16:43				
23	05:55		06:25		18:39 (D03)	06:56		07:27		07:04		15:51 (D04)	07:30				
	20:34		19:57	31	19:10 (D03)	19:06		18:18		16:45	25	16:16 (D04)	16:43				
24	05:56		06:26		18:38 (D03)	06:57		07:29		07:05		15:52 (D04)	07:30				
	20:33		19:55	33	19:11 (D03)	19:04		18:17		16:44	25	16:17 (D04)	16:44				
25	05:57		06:27		18:37 (D03)	06:58		07:30		07:06		15:52 (D04)	07:31				
	20:32		19:54	34	19:11 (D03)	19:03		18:15		16:44	25	16:17 (D04)	16:45				
26	05:58		06:28		18:37 (D03)	06:59		07:31		07:07		15:53 (D04)	07:31				
	20:31		19:52	34	19:11 (D03)	19:01		18:14		16:43	24	16:17 (D04)	16:45				
27	05:59		06:29		18:36 (D03)	07:00		07:32		07:08		15:53 (D04)	07:31				
	20:30		19:51	35	19:11 (D03)	18:59		18:13		16:43	24	16:17 (D04)	16:46				
28	06:00	19:34 (D02)	06:30		18:35 (D03)	07:01		07:33		07:09		15:54 (D04)	07:32				
	20:29	9	19:43 (D02)	19:49	36	19:11 (D03)	18:58	18:11	16:42	23	16:17 (D04)	16:46					
29	06:01		19:31 (D02)	06:31	18:35 (D03)	07:02		07:34	07:10	15:54 (D04)	07:32						
	20:28	13	19:44 (D02)	19:48	36	19:11 (D03)	18:56	18:10	16:42	23	16:17 (D04)	16:47					
30	06:02		19:30 (D02)	06:32	18:35 (D03)	07:03		07:35	07:11	15:55 (D04)	07:32						
	20:27	16	19:46 (D02)	19:46	36	19:11 (D03)	18:54	18:09	16:42	21	16:16 (D04)	16:48					
31	06:03		19:29 (D02)	06:33	18:35 (D03)	07:04		07:37					07:32				
	20:26	18	19:47 (D02)	19:45	36	19:11 (D03)	18:57	18:07					16:49				
		Potential sun hours	458		428		375		346	298			288				
		Total, worst case	56		827		278					469		132			
		Sun reduction	0.97		0.96		0.93					0.61		0.47			
		Oper. time red.	1.00		1.00		1.00					1.00		1.00			
		Wind dir. red.	0.52		0.58		0.63					0.88		0.88			
		Total reduction	0.53		0.59		0.62					0.56		0.43			
		Total, real	30		484		171					265		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	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: 15 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (15)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March		April		May		June							
1	07:32	15:46 (D04)	07:19	06:43	06:52	18:10 (D03)	06:07	19:02 (D02)	05:39							
	16:50	25	16:11 (D04)	17:23	19:31	36	18:46 (D03)	06:03	19:20 (D02)	05:32						
2	07:33	15:47 (D04)	07:18	06:41	06:51	18:10 (D03)	06:06	19:04 (D02)	05:38							
	16:50	24	16:11 (D04)	17:25	19:32	35	18:45 (D03)	06:04	15	19:19 (D02)	05:33					
3	07:33	15:47 (D04)	07:17	06:40	06:49	18:10 (D03)	06:05	19:05 (D02)	05:38							
	16:51	24	16:11 (D04)	17:26	19:33	34	18:44 (D03)	06:05	11	19:16 (D02)	05:34					
4	07:33	15:48 (D04)	07:16	06:38	06:48	18:11 (D03)	06:03									05:38
	16:52	24	16:12 (D04)	17:27	19:34	32	18:43 (D03)	06:06								20:34
5	07:33	15:49 (D04)	07:15	06:37	06:46	18:11 (D03)	06:02									05:37
	16:53	23	16:12 (D04)	17:28	19:35	30	18:41 (D03)	06:07								20:35
6	07:33	15:50 (D04)	07:14	06:35	06:44	18:12 (D03)	06:01									05:37
	16:54	22	16:12 (D04)	17:30	19:36	27	18:39 (D03)	06:08								20:36
7	07:33	15:50 (D04)	07:13	06:34	06:43	18:14 (D03)	06:00									05:37
	16:55	22	16:12 (D04)	17:31	19:37	24	18:38 (D03)	06:09								20:36
8	07:32	15:50 (D04)	07:12	07:32	06:41	18:16 (D03)	05:59									05:36
	16:56	22	16:12 (D04)	17:32	19:39	19	18:35 (D03)	06:10								20:37
9	07:32	15:52 (D04)	07:10	07:30	06:39	18:19 (D03)	05:57									05:36
	16:57	20	16:12 (D04)	17:33	19:40	14	18:33 (D03)	06:11								20:38
10	07:32	15:53 (D04)	07:09	07:29	06:38											05:36
	16:58	19	16:12 (D04)	17:35	19:41											20:38
11	07:32	15:54 (D04)	07:08	07:27	06:36											05:36
	16:59	18	16:12 (D04)	17:36	19:42											20:39
12	07:32	15:55 (D04)	07:07	07:26	06:35											05:36
	17:00	16	16:11 (D04)	17:37	19:43											20:39
13	07:31	15:56 (D04)	07:06	07:24	06:33											05:36
	17:01	15	16:11 (D04)	17:38	19:44											20:40
14	07:31	15:58 (D04)	07:04	07:22	06:32	19:11 (D02)	05:52									05:36
	17:02	11	16:09 (D04)	17:39	19:45	8	19:19 (D02)	06:16								20:40
15	07:31	16:00 (D04)	07:03	07:21	06:30	19:07 (D02)	05:51									05:36
	17:03	8	16:08 (D04)	17:41	19:46	14	19:21 (D02)	06:17								20:41
16	07:30			07:02	06:28	19:05 (D02)	05:50									05:36
	17:04			17:42	19:47	18	19:23 (D02)	06:18								20:41
17	07:30			07:00	06:27	19:03 (D02)	05:49									05:36
	17:05			17:43	18:40 (D03)	21	19:24 (D02)	06:19								20:41
18	07:29			06:59	18:21 (D03)	06:25	19:02 (D02)	05:48								05:36
	17:07			17:44	18:42 (D03)	23	19:25 (D02)	06:20								20:42
19	07:29			06:58	18:18 (D03)	06:24	19:01 (D02)	05:47								05:36
	17:08			17:46	18:44 (D03)	24	19:25 (D02)	06:21								20:42
20	07:28			06:56	18:17 (D03)	06:22	19:00 (D02)	05:47								05:36
	17:09			17:47	18:46 (D03)	26	19:26 (D02)	06:22								20:42
21	07:28			06:55	18:15 (D03)	06:21	18:59 (D02)	05:46								05:36
	17:10			17:48	18:46 (D03)	27	19:26 (D02)	06:23								20:43
22	07:27			06:53	18:13 (D03)	06:19	18:59 (D02)	05:45								05:36
	17:11			17:49	18:47 (D03)	27	19:26 (D02)	06:24								20:43
23	07:26			06:52	18:13 (D03)	06:18	18:58 (D02)	05:44								05:37
	17:12			17:50	18:48 (D03)	28	19:26 (D02)	06:25								20:43
24	07:26			06:50	18:12 (D03)	06:17	18:58 (D02)	05:43								05:37
	17:14			17:51	18:48 (D03)	28	19:26 (D02)	06:26								20:43
25	07:25			06:49	18:11 (D03)	06:15	18:59 (D02)	05:43								05:37
	17:15			17:53	18:48 (D03)	27	19:26 (D02)	06:26								20:43
26	07:24			06:48	18:10 (D03)	06:14	18:58 (D02)	05:42								05:38
	17:16			17:54	18:48 (D03)	27	19:25 (D02)	06:27								20:44
27	07:23			06:46	18:10 (D03)	06:12	18:59 (D02)	05:41								05:38
	17:17			17:55	18:48 (D03)	25	19:24 (D02)	06:28								20:44
28	07:22			06:45	18:09 (D03)	06:11	19:00 (D02)	05:41								05:38
	17:18			17:56	18:48 (D03)	20:00	19:24 (D02)	06:29								20:44
29	07:22			06:57	18:09 (D03)	06:10	19:00 (D02)	05:40								05:39
	17:20			19:28	18:47 (D03)	22	19:22 (D02)	06:30								20:44
30	07:21			06:56	18:09 (D03)	06:08	19:01 (D02)	05:40								05:39
	17:21			19:29	18:47 (D03)	21	19:22 (D02)	06:31								20:44
31	07:20			06:54	18:09 (D03)											05:39
	17:22			19:30	18:46 (D03)											20:44
	Potential sun hours	298		369	398		448									452
	Total, worst case	293		493	641		44									
	Sun reduction	0.45		0.73	0.82		0.92									
	Oper. time red.	1.00		1.00	1.00		1.00									
	Wind dir. red.	0.89		0.71	0.62		0.56									
	Total reduction	0.42		0.54	0.53		0.54									
	Total, real	122		267	340		24									

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

Shadow receptor: 15 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (15)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July	August	September	October	November	December										
1	05:40	06:04	06:34	07:04	06:38	07:12	15:36	(D04)								
	20:44	20:25	19:43	18:53	18:06	16:41	18	15:54	(D04)							
2	05:40	06:05	06:35	07:05	06:39	07:13	15:36	(D04)								
	20:44	20:24	19:41	18:51	17:05	16:41	19	15:55	(D04)							
3	05:41	06:05	06:36	18:16 (D03)	07:06	06:40	07:14	15:36	(D04)							
	20:43	20:23	19:40	18:30 (D03)	18:49	17:04	16:41	20	15:56	(D04)						
4	05:41	06:06	06:37	18:13 (D03)	07:07	06:41	07:15	15:36	(D04)							
	20:43	20:22	19:38	18:32 (D03)	18:48	17:02	16:40	21	15:57	(D04)						
5	05:42	06:07	06:38	18:10 (D03)	07:08	06:43	07:16	15:36	(D04)							
	20:43	20:21	19:36	18:34 (D03)	18:46	17:01	16:40	21	15:57	(D04)						
6	05:42	06:08	06:39	18:08 (D03)	07:09	06:44	07:17	15:36	(D04)							
	20:43	20:20	19:35	18:35 (D03)	18:44	17:00	16:40	22	15:58	(D04)						
7	05:43	06:09	06:40	18:07 (D03)	07:10	06:45	07:18	15:36	(D04)							
	20:43	20:19	19:33	18:36 (D03)	18:43	16:59	16:40	23	15:59	(D04)						
8	05:44	06:10	06:41	18:05 (D03)	07:11	06:46	07:19	15:35	(D04)							
	20:42	20:17	19:31	18:37 (D03)	18:41	16:58	16:40	24	15:59	(D04)						
9	05:44	06:11	19:18 (D02)	06:42	18:04 (D03)	07:12	06:47	07:20	15:35	(D04)						
	20:42	20:16	5 19:23 (D02)	19:30	34	18:38 (D03)	18:39	16:57	16:40	24	15:59	(D04)				
10	05:45	06:12	19:14 (D02)	06:43	18:03 (D03)	07:13	06:48	07:21	15:36	(D04)						
	20:42	20:15	12 19:26 (D02)	19:28	35	18:38 (D03)	18:38	16:56	16:40	24	16:00	(D04)				
11	05:46	06:13	19:12 (D02)	06:44	18:02 (D03)	07:14	06:50	07:22	15:36	(D04)						
	20:41	20:14	16 19:28 (D02)	19:26	36	18:38 (D03)	18:36	16:55	16:40	25	16:01	(D04)				
12	05:46	06:14	19:10 (D02)	06:45	18:01 (D03)	07:15	06:51	07:23	15:37	(D04)						
	20:41	20:12	19 19:29 (D02)	19:25	37	18:38 (D03)	18:35	16:54	16:40	25	16:02	(D04)				
13	05:47	06:15	19:08 (D02)	06:46	18:00 (D03)	07:16	06:52	07:23	15:37	(D04)						
	20:40	20:11	22 19:30 (D02)	19:23	38	18:38 (D03)	18:33	16:53	16:40	25	16:02	(D04)				
14	05:48	06:16	19:07 (D02)	06:47	18:00 (D03)	07:17	06:53	07:24	15:37	(D04)						
	20:40	20:10	23 19:30 (D02)	19:21	38	18:38 (D03)	18:32	16:52	16:40	25	16:02	(D04)				
15	05:49	06:17	19:06 (D02)	06:48	17:59 (D03)	07:19	06:54	07:25	15:38	(D04)						
	20:39	20:08	25 19:31 (D02)	19:20	39	18:38 (D03)	18:30	16:51	16:41	25	16:03	(D04)				
16	05:49	06:18	19:06 (D02)	06:49	17:59 (D03)	07:20	06:56	07:26	15:38	(D04)						
	20:39	20:07	25 19:31 (D02)	19:18	38	18:37 (D03)	18:28	16:50	16:41	26	16:04	(D04)				
17	05:50	06:19	19:05 (D02)	06:50	17:59 (D03)	07:21	06:57	07:26	15:38	(D04)						
	20:38	20:06	26 19:31 (D02)	19:16	38	18:37 (D03)	18:27	16:49	16:41	25	16:03	(D04)				
18	05:51	06:20	19:05 (D02)	06:51	17:59 (D03)	07:22	06:58	07:27	15:39	(D04)						
	20:37	20:04	27 19:32 (D02)	19:15	37	18:36 (D03)	18:25	16:48	16:41	25	16:04	(D04)				
19	05:52	06:21	19:04 (D02)	06:52	17:58 (D03)	07:23	06:59	07:28	15:40	(D04)						
	20:37	20:03	28 19:32 (D02)	19:13	36	18:34 (D03)	18:24	16:48	16:42	25	16:05	(D04)				
20	05:53	06:22	19:04 (D02)	06:53	17:58 (D03)	07:24	07:00	07:28	15:40	(D04)						
	20:36	20:01	27 19:31 (D02)	19:11	35	18:33 (D03)	18:22	16:47	16:42	25	16:05	(D04)				
21	05:54	06:23	19:04 (D02)	06:54	17:59 (D03)	07:25	07:01	07:29	15:41	(D04)						
	20:35	20:00	27 19:31 (D02)	19:10	33	18:32 (D03)	18:21	16:46	16:43	25	16:06	(D04)				
22	05:54	06:24	19:04 (D02)	06:55	17:59 (D03)	07:26	07:03	07:29	15:41	(D04)						
	20:35	19:58	27 19:31 (D02)	19:08	32	18:31 (D03)	18:20	16:46	16:43	25	16:06	(D04)				
23	05:55	06:25	19:04 (D02)	06:56	18:00 (D03)	07:27	07:04	07:30	15:42	(D04)						
	20:34	19:57	26 19:30 (D02)	19:06	29	18:29 (D03)	18:18	16:45	16:43	25	16:07	(D04)				
24	05:56	06:26	19:05 (D02)	06:57	18:01 (D03)	07:29	07:05	07:30	15:42	(D04)						
	20:33	19:55	24 19:29 (D02)	19:04	27	18:28 (D03)	18:17	16:44	16:44	25	16:07	(D04)				
25	05:57	06:27	19:05 (D02)	06:58	18:03 (D03)	07:30	07:06	07:31	15:42	(D04)						
	20:32	19:54	23 19:28 (D02)	19:03	22	18:25 (D03)	18:15	16:44	16:45	25	16:07	(D04)				
26	05:58	06:28	19:06 (D02)	06:59	18:05 (D03)	07:31	07:07	07:31	15:43	(D04)						
	20:31	19:52	21 19:27 (D02)	19:01	17	18:22 (D03)	18:14	16:43	16:45	25	16:08	(D04)				
27	05:59	06:29	19:07 (D02)	07:00	18:09 (D03)	07:32	07:08	15:39	(D04)	07:31	15:43	(D04)				
	20:30	19:51	18 19:25 (D02)	18:59	9	18:18 (D03)	18:13	16:43	8	15:47	(D04)	16:46	26	16:09	(D04)	
28	06:00	06:30	19:09 (D02)	07:01		07:33	07:09	15:38	(D04)	07:32	15:43	(D04)				
	20:29	19:49	14 19:23 (D02)	18:58		18:11	16:42	11	15:49	(D04)	16:46	26	16:09	(D04)		
29	06:01	06:31	19:12 (D02)	07:02		07:34	07:10	15:37	(D04)	07:32	15:44	(D04)				
	20:28	19:48	7 19:19 (D02)	18:56		18:10	16:42	14	15:51	(D04)	16:47	25	16:09	(D04)		
30	06:02	06:32		07:03		07:35	07:11	15:36	(D04)	07:32	15:45	(D04)				
	20:27	19:46		18:54		18:09	16:42	16	15:52	(D04)	16:48	25	16:10	(D04)		
31	06:03	06:33				07:37				07:32		16:49	24	16:10	(D04)	
	20:26	19:45				18:07				288						
Potential sun hours	458	428		375		346	298									
Total, worst case			442		755		49									
Sun reduction			0.96		0.93		0.61									
Oper. time red.			1.00		1.00		1.00									
Wind dir. red.			0.56		0.71		0.89									
Total reduction			0.56		0.69		0.57									
Total, real			248		522		28									

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)
Sun set (hh:mm)						

SHADOW - Calendar

Shadow receptor: 46 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (46)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March	April		May		June								
1	07:32	07:19	06:43	06:52	17:58 (D03)	06:07	18:59 (D02)	05:39								
	16:50	17:23	17:57	19:31	23	18:21 (D03)	20:03	12	19:11 (D02)	20:32						
2	07:33	07:18	06:41	06:51	18:00 (D03)	06:06	19:04 (D02)	05:38								
	16:50	17:25	17:58	19:32	18	18:18 (D03)	20:04	2	19:06 (D02)	20:33						
3	07:33	07:17	06:40	06:49	18:04 (D03)	06:05					05:38					
	16:51	17:26	18:00	19:33	8	18:12 (D03)	20:05				20:34					
4	07:33	07:16	06:38	06:48		06:03					05:38					
	16:52	17:27	18:01	19:34		20:06					20:34					
5	07:33	07:15	06:37	06:46		06:02					05:37					
	16:53	17:28	18:02	19:35		20:07					20:35					
6	07:33	07:14	06:35	17:11 (D03)	06:44		06:01				05:37					
	16:54	17:30	18:03	10	17:21 (D03)	19:36	20:08				20:36					
7	07:33	07:13	06:34	17:06 (D03)	06:43		06:00				05:37					
	16:55	17:31	18:04	19	17:25 (D03)	19:37	20:09				20:36					
8	07:32	07:12	07:32	18:03 (D03)	06:41		05:59				05:36					
	16:56	17:32	19:05	24	18:27 (D03)	19:39	20:10				20:37					
9	07:32	07:10	07:30	18:01 (D03)	06:39		05:57				05:36					
	16:57	17:33	19:06	29	18:30 (D03)	19:40	20:11				20:38					
10	07:32	07:09	07:29	17:59 (D03)	06:38	19:06 (D02)	05:56				05:36					
	16:58	17:35	19:07	32	18:31 (D03)	19:41	6	19:12 (D02)	20:12		20:38					
11	07:32	07:08	07:27	17:57 (D03)	06:36	19:01 (D02)	05:55				05:36					
	16:59	17:36	19:09	35	18:32 (D03)	19:42	14	19:15 (D02)	20:13		20:39					
12	07:32	07:07	07:26	17:56 (D03)	06:35	18:59 (D02)	05:54				05:36					
	17:00	17:37	19:10	37	18:33 (D03)	19:43	19	19:18 (D02)	20:14		20:39					
13	07:31	07:06	07:24	17:54 (D03)	06:33	18:57 (D02)	05:53				05:36					
	17:01	17:38	19:11	39	18:33 (D03)	19:44	22	19:19 (D02)	20:15		20:40					
14	07:31	07:04	07:22	17:54 (D03)	06:32	18:56 (D02)	05:52				05:36					
	17:02	17:39	19:12	41	18:35 (D03)	19:45	24	19:20 (D02)	20:16		20:40					
15	07:31	07:03	07:21	17:53 (D03)	06:30	18:54 (D02)	05:51				05:36					
	17:03	17:41	19:13	42	18:35 (D03)	19:46	27	19:21 (D02)	20:17		20:41					
16	07:30	07:02	07:19	17:51 (D03)	06:28	18:53 (D02)	05:50				05:36					
	17:04	17:42	19:14	44	18:35 (D03)	19:47	29	19:22 (D02)	20:18		20:41					
17	07:30	07:00	07:17	17:51 (D03)	06:27	18:52 (D02)	05:49				05:36					
	17:05	17:43	19:15	44	18:35 (D03)	19:48	29	19:21 (D02)	20:19		20:41					
18	07:29	06:59	07:16	17:51 (D03)	06:25	18:52 (D02)	05:48				05:36					
	17:07	17:44	19:16	44	18:35 (D03)	19:49	30	19:22 (D02)	20:20		20:42					
19	07:29	06:58	07:14	17:50 (D03)	06:24	18:51 (D02)	05:47				05:36					
	17:08	17:46	19:17	45	18:35 (D03)	19:50	30	19:21 (D02)	20:21		20:42					
20	07:28	06:56	07:12	17:50 (D03)	06:22	18:51 (D02)	05:47				05:36					
	17:09	17:47	19:18	45	18:35 (D03)	19:51	31	19:22 (D02)	20:22		20:42					
21	07:28	06:55	07:11	17:50 (D03)	06:21	18:50 (D02)	05:46				05:36					
	17:10	17:48	19:19	44	18:34 (D03)	19:52	31	19:21 (D02)	20:23		20:43					
22	07:27	06:53	07:09	17:49 (D03)	06:19	18:51 (D02)	05:45				05:36					
	17:11	17:49	19:21	45	18:34 (D03)	19:53	30	19:21 (D02)	20:24		20:43					
23	07:26	06:52	07:07	17:50 (D03)	06:18	18:50 (D02)	05:44				05:37					
	17:12	17:50	19:22	44	18:34 (D03)	19:54	30	19:20 (D02)	20:25		20:43					
24	07:26	06:50	07:06	17:50 (D03)	06:17	18:51 (D02)	05:43				05:37					
	17:14	17:51	19:23	43	18:33 (D03)	19:55	29	19:20 (D02)	20:26		20:43					
25	07:25	06:49	07:04	17:50 (D03)	06:15	18:52 (D02)	05:43				05:37					
	17:15	17:53	19:24	41	18:31 (D03)	19:56	28	19:20 (D02)	20:26		20:43					
26	07:24	06:48	07:02	17:51 (D03)	06:14	18:52 (D02)	05:42				05:38					
	17:16	17:54	19:25	40	18:31 (D03)	19:57	26	19:18 (D02)	20:27		20:44					
27	07:23	06:46	07:01	17:51 (D03)	06:12	18:53 (D02)	05:41				05:38					
	17:17	17:55	19:26	39	18:30 (D03)	19:59	24	19:17 (D02)	20:28		20:44					
28	07:22	06:45	06:59	17:52 (D03)	06:11	18:54 (D02)	05:41				05:38					
	17:18	17:56	19:27	36	18:28 (D03)	20:00	22	19:16 (D02)	20:29		20:44					
29	07:22		06:57	17:52 (D03)	06:10	18:54 (D02)	05:40				05:39					
	17:20		19:28	34	18:26 (D03)	20:01	20	19:14 (D02)	20:30		20:44					
30	07:21		06:56	17:54 (D03)	06:08	18:56 (D02)	05:40				05:39					
	17:21		19:29	31	18:25 (D03)	20:02	17	19:13 (D02)	20:31		20:44					
31	07:20		06:54	17:55 (D03)							05:39					
	17:22		19:30	28	18:23 (D03)						20:31					
					398						448					452
	Potential sun hours	298	297	369												
	Total, worst case				955		567				14					
	Sun reduction				0.73		0.82				0.92					
	Oper. time red.				1.00		1.00				1.00					
	Wind dir. red.				0.76		0.60				0.58					
	Total reduction				0.55		0.49				0.54					
	Total, real				530		279				8					

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

Shadow receptor: 46 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (46)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July	August	September	October	November	December	
1	05:40	06:04	06:34	19:00 (D02)	07:04	17:34 (D03)	06:38 07:12
	20:44	20:25	19:43	14 19:14 (D02)	18:53 38	18:12 (D03)	18:06 16:41
2	05:40	06:05	06:35	19:04 (D02)	07:05	17:35 (D03)	06:39 07:13
	20:44	20:24	19:41	6 19:10 (D02)	18:51 36	18:11 (D03)	17:05 16:41
3	05:41	06:05	06:36		07:06	17:35 (D03)	06:40 07:14
	20:43	20:23	19:40		18:49 34	18:09 (D03)	17:04 16:41
4	05:41	06:06	06:37		07:07	17:38 (D03)	06:41 07:15
	20:43	20:22	19:38		18:48 30	18:08 (D03)	17:02 16:40
5	05:42	06:07	06:38		07:08	17:39 (D03)	06:43 07:16
	20:43	20:21	19:36		18:46 27	18:06 (D03)	17:01 16:40
6	05:42	06:08	06:39		07:09	17:41 (D03)	06:44 07:17
	20:43	20:20	19:35		18:44 22	18:03 (D03)	17:00 16:40
7	05:43	06:09	06:40		07:10	17:44 (D03)	06:45 07:18
	20:43	20:19	19:33		18:43 15	17:59 (D03)	06:59 16:40
8	05:44	06:10	06:41		07:11		06:46 07:19
	20:42	20:17	19:31		18:41		16:58 16:40
9	05:44	06:11	06:42	17:59 (D03)	07:12		06:47 07:20
	20:42	20:16	19:30	7 18:06 (D03)	18:40		16:57 16:40
10	05:45	06:12	06:43	17:54 (D03)	07:13		06:48 07:21
	20:42	20:15	19:28	17 18:11 (D03)	18:38		16:56 16:40
11	05:46	06:13	19:10 (D02)	06:44	17:50 (D03)	07:14	06:50 07:22
	20:41	20:14	19:17 (D02)	19:26 23	18:13 (D03)	18:36	16:55 16:40
12	05:46	06:14	19:06 (D02)	06:45	17:48 (D03)	07:15	06:51 07:23
	20:41	20:12	19:12	14 19:20 (D02)	19:25 27	18:15 (D03)	18:35
13	05:47	06:15	19:03 (D02)	06:46	17:46 (D03)	07:16	06:52 07:23
	20:40	20:11	18	19:21 (D02)	19:23 30	18:16 (D03)	18:33
14	05:48	06:16	19:02 (D02)	06:47	17:44 (D03)	07:17	06:53 07:24
	20:40	20:10	20	19:22 (D02)	19:21 33	18:17 (D03)	18:32
15	05:49	06:17	19:00 (D02)	06:48	17:42 (D03)	07:19	06:54 07:25
	20:39	20:08	23	19:23 (D02)	19:20 36	18:18 (D03)	18:30
16	05:49	06:18	18:59 (D02)	06:49	17:41 (D03)	07:20	06:56 07:26
	20:39	20:07	25	19:24 (D02)	19:18 38	18:19 (D03)	18:28
17	05:50	06:19	18:58 (D02)	06:50	17:40 (D03)	07:21	06:57 07:26
	20:38	20:06	27	19:25 (D02)	19:16 39	18:19 (D03)	18:27
18	05:51	06:20	18:57 (D02)	06:51	17:38 (D03)	07:22	06:58 07:27
	20:37	20:04	28	19:25 (D02)	19:15 42	18:20 (D03)	18:25
19	05:52	06:21	18:57 (D02)	06:52	17:38 (D03)	07:23	06:59 07:28
	20:37	20:03	29	19:26 (D02)	19:13 42	18:20 (D03)	18:24
20	05:53	06:22	18:56 (D02)	06:53	17:36 (D03)	07:24	07:00 07:28
	20:36	20:01	30	19:26 (D02)	19:11 43	18:19 (D03)	18:22
21	05:54	06:23	18:56 (D02)	06:54	17:35 (D03)	07:25	07:01 07:29
	20:35	20:00	30	19:26 (D02)	19:10 44	18:19 (D03)	18:21
22	05:54	06:24	18:55 (D02)	06:55	17:34 (D03)	07:26	07:03 07:29
	20:35	19:58	31	19:26 (D02)	19:08 45	18:19 (D03)	18:20
23	05:55	06:25	18:55 (D02)	06:56	17:34 (D03)	07:27	07:04 07:30
	20:34	19:57	31	19:26 (D02)	19:06 44	18:18 (D03)	18:18
24	05:56	06:26	18:55 (D02)	06:57	17:33 (D03)	07:29	07:05 07:30
	20:33	19:55	30	19:25 (D02)	19:04 45	18:18 (D03)	18:17
25	05:57	06:27	18:55 (D02)	06:58	17:33 (D03)	07:30	07:06 07:31
	20:32	19:54	30	19:25 (D02)	19:03 45	18:18 (D03)	18:15
26	05:58	06:28	18:55 (D02)	06:59	17:33 (D03)	07:31	07:07 07:31
	20:31	19:52	29	19:24 (D02)	19:01 44	18:17 (D03)	18:14
27	05:59	06:29	18:55 (D02)	07:00	17:33 (D03)	07:32	07:08 07:31
	20:30	19:51	28	19:23 (D02)	18:59 43	18:16 (D03)	18:13
28	06:00	06:30	18:56 (D02)	07:01	17:33 (D03)	07:33	07:09 07:32
	20:29	19:49	26	19:22 (D02)	18:58 42	18:15 (D03)	18:11
29	06:01	06:31	18:57 (D02)	07:02	17:33 (D03)	07:34	07:10 07:32
	20:28	19:48	24	19:21 (D02)	18:56 41	18:14 (D03)	18:10
30	06:02	06:32	18:58 (D02)	07:03	17:33 (D03)	07:35	07:11 07:32
	20:27	19:46	22	19:20 (D02)	18:54 40	18:13 (D03)	18:09
31	06:03	06:33	18:59 (D02)			07:37	
	20:26	19:45	19	19:18 (D02)		18:07	16:49
Potential sun hours	458	428		375		346	298 288

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

Shadow receptor: 47 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (47)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March	April	May	June	
1	07:32	15:41 (D04)	07:19	06:43	06:52	18:02 (D03)	06:07
	16:50	15 15:56 (D04)	17:23	17:57	19:31	41 18:43 (D03)	20:03
2	07:33	15:42 (D04)	07:18	06:41	06:51	18:02 (D03)	06:06
	16:50	13 15:55 (D04)	17:25	17:58	19:32	40 18:42 (D03)	20:04
3	07:33	15:43 (D04)	07:17	06:40	06:49	18:02 (D03)	06:05
	16:51	12 15:55 (D04)	17:26	18:00	19:33	39 18:41 (D03)	20:05
4	07:33	15:45 (D04)	07:16	06:38	06:48	18:03 (D03)	06:03
	16:52	10 15:55 (D04)	17:27	18:01	19:34	38 18:41 (D03)	20:06
5	07:33	15:47 (D04)	07:15	06:37	06:46	18:03 (D03)	06:02
	16:53	7 15:54 (D04)	17:28	18:02	19:35	36 18:39 (D03)	20:07
6	07:33		07:14	06:35	06:44	18:04 (D03)	06:01
	16:54		17:30	18:03	19:36	33 18:37 (D03)	20:08
7	07:33		07:13	06:34	06:43	18:05 (D03)	06:00
	16:55		17:31	18:04	19:37	30 18:36 (D03)	20:09
8	07:32		07:12	07:32	06:41	18:07 (D03)	05:59
	16:56		17:32	19:05	19:39	27 18:34 (D03)	20:10
9	07:32		07:10	07:30	06:39	18:09 (D03)	05:57
	16:57		17:33	19:06	19:40	23 18:32 (D03)	20:11
10	07:32		07:09	07:29	06:38	18:11 (D03)	05:56
	16:58		17:35	19:07	19:41	18 18:29 (D03)	20:12
11	07:32		07:08	07:27	06:36	18:14 (D03)	05:55
	16:59		17:36	19:09	19:42	10 18:24 (D03)	20:13
12	07:32		07:07	07:26	06:35		05:54
	17:00		17:37	19:10	19:43		20:14
13	07:31		07:06	07:24	06:33		05:53
	17:01		17:38	19:11	19:44		20:15
14	07:31		07:04	07:22	06:32		05:52
	17:02		17:39	19:12	19:45		20:16
15	07:31		07:03	07:21	18:20 (D03)	06:30	19:14 (D02)
	17:03		17:41	19:13	14 18:34 (D03)	19:46	2 19:16 (D02)
16	07:30		07:02	07:19	18:16 (D03)	06:28	19:09 (D02)
	17:04		17:42	19:14	21 18:37 (D03)	19:47	13 19:22 (D02)
17	07:30		07:00	07:17	18:14 (D03)	06:27	19:06 (D02)
	17:05		17:43	19:15	26 18:40 (D03)	19:48	17 19:23 (D02)
18	07:29		06:59	07:16	18:11 (D03)	06:25	19:04 (D02)
	17:07		17:44	19:16	30 18:41 (D03)	19:49	21 19:25 (D02)
19	07:29		06:58	07:14	18:09 (D03)	06:24	19:02 (D02)
	17:08		17:46	19:17	33 18:42 (D03)	19:50	24 19:26 (D02)
20	07:28		06:56	07:12	18:08 (D03)	06:22	19:01 (D02)
	17:09		17:47	19:18	36 18:44 (D03)	19:51	26 19:27 (D02)
21	07:28		06:55	07:11	18:07 (D03)	06:21	19:00 (D02)
	17:10		17:48	19:19	37 18:44 (D03)	19:52	27 19:27 (D02)
22	07:27		06:53	07:09	18:05 (D03)	06:19	19:00 (D02)
	17:11		17:49	19:21	39 18:44 (D03)	19:53	28 19:28 (D02)
23	07:26		06:52	07:07	18:05 (D03)	06:18	18:58 (D02)
	17:12		17:50	19:22	40 18:45 (D03)	19:54	29 19:27 (D02)
24	07:26		06:50	07:06	18:04 (D03)	06:17	18:58 (D02)
	17:14		17:51	19:23	41 18:45 (D03)	19:55	30 19:28 (D02)
25	07:25		06:49	07:04	18:03 (D03)	06:15	18:58 (D02)
	17:15		17:53	19:24	42 18:45 (D03)	19:56	30 19:28 (D02)
26	07:24		06:48	07:02	18:03 (D03)	06:14	18:58 (D02)
	17:16		17:54	19:25	43 18:46 (D03)	19:57	29 19:27 (D02)
27	07:23		06:46	07:01	18:02 (D03)	06:12	18:58 (D02)
	17:17		17:55	19:26	43 18:45 (D03)	19:59	29 19:27 (D02)
28	07:22		06:45	06:59	18:01 (D03)	06:11	18:58 (D02)
	17:18		17:56	19:27	44 18:45 (D03)	20:00	29 19:27 (D02)
29	07:22		06:57	18:01 (D03)	06:10	18:58 (D02)	05:40
	17:20		19:28	43 18:44 (D03)	20:01	28 19:26 (D02)	20:30
30	07:21		06:56	18:01 (D03)	06:08	18:58 (D02)	05:40
	17:21		19:29	43 18:44 (D03)	20:02	28 19:26 (D02)	20:31
31	07:20		06:54	18:01 (D03)		05:39	
	17:22		19:30	42 18:43 (D03)		20:31	
Potential sun hours	298	297	369	398	448		452
Total, worst case	57		617	725		138	
Sun reduction	0.45		0.73	0.82		0.92	
Oper. time red.	1.00		1.00	1.00		1.00	
Wind dir. red.	0.89		0.72	0.63		0.55	
Total reduction	0.41		0.54	0.53		0.52	
Total, real	23		332	384		72	

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)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: 47 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (47)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) [%]											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time															Sum	
N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
23	65	319	1.935	1.830	119	5	24	340	1.432	1.766	761	99	19	10	13	8.760

	July	August	September	October	November	December
1	05:40	06:04	06:34	18:13 (D03)	07:04	06:38
	20:44	20:25	19:43	18:23 (D03)	18:53	18:06
2	05:40	06:05	06:35	18:09 (D03)	07:05	06:39
	20:44	20:24	19:41	18:27 (D03)	18:51	17:05
3	05:41	06:05	06:36	18:06 (D03)	07:06	06:40
	20:43	20:23	19:40	18:29 (D03)	18:49	17:04
4	05:41	06:06	06:37	18:04 (D03)	07:07	06:41
	20:43	20:22	19:38	18:31 (D03)	18:48	17:02
5	05:42	06:07	19:20 (D02)	06:38	18:02 (D03)	07:08
	20:43	20:21	19:23 (D02)	19:36	18:32 (D03)	18:46
6	05:42	06:08	19:16 (D02)	06:39	18:00 (D03)	07:09
	20:43	20:20	19:27 (D02)	19:35	18:33 (D03)	18:44
7	05:43	06:09	19:13 (D02)	06:40	17:59 (D03)	07:10
	20:43	20:19	19:29 (D02)	19:33	18:34 (D03)	18:43
8	05:44	06:10	19:12 (D02)	06:41	17:57 (D03)	07:11
	20:42	20:17	19:31 (D02)	19:31	18:35 (D03)	18:41
9	05:44	06:11	19:10 (D02)	06:42	17:56 (D03)	07:12
	20:42	20:16	19:32 (D02)	19:30	18:35 (D03)	18:40
10	05:45	06:12	19:09 (D02)	06:43	17:55 (D03)	07:13
	20:42	20:15	19:33 (D02)	19:28	18:35 (D03)	18:38
11	05:46	06:13	19:08 (D02)	06:44	17:54 (D03)	07:14
	20:41	20:14	19:34 (D02)	19:26	18:36 (D03)	18:36
12	05:46	06:14	19:08 (D02)	06:45	17:53 (D03)	07:15
	20:41	20:12	19:34 (D02)	19:25	18:36 (D03)	18:35
13	05:47	06:15	19:06 (D02)	06:46	17:53 (D03)	07:16
	20:40	20:11	19:34 (D02)	19:23	18:36 (D03)	18:33
14	05:48	06:16	19:05 (D02)	06:47	17:52 (D03)	07:17
	20:40	20:10	19:34 (D02)	19:21	18:35 (D03)	18:32
15	05:49	06:17	19:05 (D02)	06:48	17:52 (D03)	07:19
	20:39	20:08	19:34 (D02)	19:20	18:35 (D03)	18:30
16	05:49	06:18	19:05 (D02)	06:49	17:51 (D03)	07:20
	20:39	20:07	19:34 (D02)	19:18	18:35 (D03)	18:28
17	05:50	06:19	19:04 (D02)	06:50	17:51 (D03)	07:21
	20:38	20:06	19:34 (D02)	19:16	18:34 (D03)	18:27
18	05:51	06:20	19:04 (D02)	06:51	17:51 (D03)	07:22
	20:37	20:04	19:34 (D02)	19:15	18:34 (D03)	18:25
19	05:52	06:21	19:04 (D02)	06:52	17:51 (D03)	07:23
	20:37	20:03	19:34 (D02)	19:13	18:33 (D03)	18:24
20	05:53	06:22	19:04 (D02)	06:53	17:50 (D03)	07:24
	20:36	20:01	19:33 (D02)	19:11	18:31 (D03)	18:22
21	05:54	06:23	19:04 (D02)	06:54	17:50 (D03)	07:25
	20:35	20:00	19:32 (D02)	19:10	18:30 (D03)	18:21
22	05:54	06:24	19:05 (D02)	06:55	17:51 (D03)	07:26
	20:35	19:58	19:32 (D02)	19:08	18:29 (D03)	18:20
23	05:55	06:25	19:05 (D02)	06:56	17:51 (D03)	07:27
	20:34	19:57	19:31 (D02)	19:06	18:27 (D03)	18:18
24	05:56	06:26	19:06 (D02)	06:57	17:52 (D03)	07:29
	20:33	19:55	19:29 (D02)	19:04	18:26 (D03)	18:17
25	05:57	06:27	19:07 (D02)	06:58	17:53 (D03)	07:30
	20:32	19:54	19:28 (D02)	19:03	18:24 (D03)	18:15
26	05:58	06:28	19:09 (D02)	06:59	17:55 (D03)	07:31
	20:31	19:52	19:26 (D02)	19:01	18:22 (D03)	18:14
27	05:59	06:29	19:11 (D02)	07:00	17:56 (D03)	07:32
	20:30	19:51	19:23 (D02)	18:59	18:19 (D03)	18:13
28	06:00	06:30		07:01	17:59 (D03)	07:33
	20:29	19:49		18:58	18:16 (D03)	18:11
29	06:01	06:31		07:02	18:04 (D03)	07:34
	20:28	19:48		18:56	18:10 (D03)	18:10
30	06:02	06:32		07:03		18:09
	20:27	19:46		18:54		16:42
31	06:03	06:33				07:32
	20:26	19:45				16:49
Potential sun hours	458	428		375		288
Total, worst case			535		972	411
Sun reduction			0.96		0.93	0.4
Oper. time red.			1.00		1.00	1.00
Wind dir. red.			0.55		0.72	0.8
Total reduction			0.54		0.69	0.4
Total, real			291		667	171

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

Shadow receptor: 48 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (48)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March	April		May		June								
1	07:33	07:19	06:43		06:52	17:55 (D03)	06:07		18:56 (D02)	05:39						
	16:50	17:23	17:57		19:31	23	18:18 (D03)	06:03	17	19:13 (D02)	05:32					
2	07:33	07:18	06:41		06:51	17:57 (D03)	06:06		18:58 (D02)	05:38						
	16:50	17:25	17:58		19:32	17	18:14 (D03)	06:04	13	19:11 (D02)	05:33					
3	07:33	07:17	06:40		06:49	18:02 (D03)	06:05		19:02 (D02)	05:38						
	16:51	17:26	18:00		19:33	6	18:08 (D03)	06:05	3	19:05 (D02)	05:34					
4	07:33	07:16	06:38		06:48				06:03		05:38					
	16:52	17:27	18:01		19:34				20:06		20:34					
5	07:33	07:15	06:37	17:05 (D03)	06:46				06:02		05:37					
	16:53	17:28	18:02	14	17:19 (D03)	19:35			20:07		20:35					
6	07:33	07:14	06:35	17:02 (D03)	06:44				06:01		05:37					
	16:54	17:30	18:03	22	17:24 (D03)	19:36			20:08		20:36					
7	07:33	07:13	06:34	16:59 (D03)	06:43				06:00		05:37					
	16:55	17:31	18:04	26	17:25 (D03)	19:37			20:09		20:36					
8	07:32	07:12	07:32	17:56 (D03)	06:41				05:59		05:36					
	16:56	17:32	19:05	31	18:27 (D03)	19:39			20:10		20:37					
9	07:32	07:10	07:30	17:55 (D03)	06:39				05:57		05:36					
	16:57	17:33	19:06	34	18:29 (D03)	19:40			20:11		20:38					
10	07:32	07:09	07:29	17:53 (D03)	06:38	19:07 (D02)	05:56				05:36					
	16:58	17:35	19:07	37	18:30 (D03)	19:41	3	19:10 (D02)	20:12		20:38					
11	07:32	07:08	07:27	17:52 (D03)	06:36	19:01 (D02)	05:55				05:36					
	16:59	17:36	19:09	39	18:31 (D03)	19:42	14	19:15 (D02)	20:13		20:39					
12	07:32	07:07	07:26	17:51 (D03)	06:35	18:59 (D02)	05:54				05:36					
	17:00	17:37	19:10	41	18:32 (D03)	19:43	18	19:17 (D02)	20:14		20:39					
13	07:31	07:06	07:24	17:49 (D03)	06:33	18:56 (D02)	05:53				05:36					
	17:01	17:38	19:11	43	18:32 (D03)	19:44	22	19:18 (D02)	20:15		20:40					
14	07:31	07:04	07:22	17:49 (D03)	06:32	18:55 (D02)	05:52				05:36					
	17:02	17:39	19:12	44	18:33 (D03)	19:45	25	19:20 (D02)	20:16		20:40					
15	07:31	07:03	07:21	17:48 (D03)	06:30	18:54 (D02)	05:51				05:36					
	17:03	17:41	19:13	45	18:33 (D03)	19:46	26	19:20 (D02)	20:17		20:41					
16	07:30	07:02	07:19	17:47 (D03)	06:28	18:53 (D02)	05:50				05:36					
	17:04	17:42	19:14	46	18:33 (D03)	19:47	28	19:21 (D02)	20:18		20:41					
17	07:30	07:00	07:17	17:47 (D03)	06:27	18:52 (D02)	05:49				05:36					
	17:05	17:43	19:15	46	18:33 (D03)	19:48	29	19:21 (D02)	20:19		20:41					
18	07:29	06:59	07:16	17:46 (D03)	06:25	18:51 (D02)	05:48				05:36					
	17:07	17:44	19:16	47	18:33 (D03)	19:49	31	19:22 (D02)	20:20		20:42					
19	07:29	06:58	07:14	17:46 (D03)	06:24	18:50 (D02)	05:47				05:36					
	17:08	17:46	19:17	46	18:32 (D03)	19:50	32	19:22 (D02)	20:21		20:42					
20	07:28	06:56	07:12	17:46 (D03)	06:22	18:50 (D02)	05:47				05:36					
	17:09	17:47	19:18	47	18:33 (D03)	19:51	32	19:22 (D02)	20:22		20:42					
21	07:28	06:55	07:11	17:46 (D03)	06:21	18:50 (D02)	05:46				05:36					
	17:10	17:48	19:19	46	18:32 (D03)	19:52	31	19:21 (D02)	20:23		20:43					
22	07:27	06:53	07:09	17:45 (D03)	06:20	18:50 (D02)	05:45				05:36					
	17:11	17:49	19:21	46	18:31 (D03)	19:53	31	19:21 (D02)	20:24		20:43					
23	07:26	06:52	07:07	17:46 (D03)	06:18	18:49 (D02)	05:44				05:37					
	17:12	17:50	19:22	45	18:31 (D03)	19:54	31	19:20 (D02)	20:25		20:43					
24	07:26	06:50	07:06	17:46 (D03)	06:17	18:50 (D02)	05:43				05:37					
	17:14	17:51	19:23	44	18:30 (D03)	19:55	30	19:20 (D02)	20:26		20:43					
25	07:25	06:49	07:04	17:46 (D03)	06:15	18:51 (D02)	05:43				05:37					
	17:15	17:53	19:24	43	18:29 (D03)	19:56	29	19:20 (D02)	20:26		20:43					
26	07:24	06:48	07:02	17:47 (D03)	06:14	18:50 (D02)	05:42				05:38					
	17:16	17:54	19:25	41	18:28 (D03)	19:57	29	19:19 (D02)	20:27		20:44					
27	07:23	06:46	07:01	17:48 (D03)	06:12	18:51 (D02)	05:41				05:38					
	17:17	17:55	19:26	39	18:27 (D03)	19:59	27	19:18 (D02)	20:28		20:44					
28	07:22	06:45	06:59	17:48 (D03)	06:11	18:52 (D02)	05:41				05:38					
	17:18	17:56	19:27	37	18:25 (D03)	20:00	25	19:17 (D02)	20:29		20:44					
29	07:22		06:57	17:49 (D03)	06:10	18:53 (D02)	05:40				05:39					
	17:20		19:28	34	18:23 (D03)	20:01	22	19:15 (D02)	20:30		20:44					
30	07:21		06:56	17:51 (D03)	06:08	18:54 (D02)	05:40				05:39					
	17:21		19:29	31	18:22 (D03)	20:02	20	19:14 (D02)	20:31		20:44					
31	07:20		06:54	17:52 (D03)					05:39							
	17:22		19:30	28	18:20 (D03)				20:31							
					398				448		452					
Potential sun hours	298	297	369													
Total, worst case				1042		581			33							
Sun reduction				0.73		0.82			0.92							
Oper. time red.				1.00		1.00			1.00							
Wind dir. red.				0.76		0.60			0.58							
Total reduction				0.56		0.49			0.54							
Total, real				583		285			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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SHADOW - Calendar

Shadow receptor: 48 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (48)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July	August	September	October	November	December	
1	05:40	06:04	06:34	19:00 (D02)	07:04	17:29 (D03)	06:38 07:12
	20:44	20:25	19:43	14 19:14 (D02)	18:53 41	18:10 (D03)	18:06 16:41
2	05:40	06:05	06:35	19:05 (D02)	07:05	17:29 (D03)	06:39 07:13
	20:44	20:24	19:41	3 19:08 (D02)	18:51 40	18:09 (D03)	17:05 16:41
3	05:41	06:05	06:36		07:06	17:38 (D03)	06:40 07:14
	20:43	20:23	19:40		18:49 38	18:08 (D03)	17:04 16:41
4	05:41	06:06	06:37		07:07	17:32 (D03)	06:41 07:15
	20:43	20:22	19:38		18:48 35	18:07 (D03)	17:02 16:40
5	05:42	06:07	06:38		07:08	17:33 (D03)	06:43 07:16
	20:43	20:21	19:36		18:46 32	18:05 (D03)	17:01 16:40
6	05:42	06:08	06:39		07:09	17:34 (D03)	06:44 07:17
	20:43	20:20	19:35		18:44 29	18:03 (D03)	17:00 16:40
7	05:43	06:09	06:40		07:10	17:36 (D03)	06:45 07:18
	20:43	20:19	19:33		18:43 25	18:01 (D03)	16:59 16:40
8	05:44	06:10	06:41		07:11	17:39 (D03)	06:46 07:19
	20:42	20:17	19:31		18:41 18	17:03 (D03)	16:58 16:40
9	05:44	06:11	06:42	17:57 (D03)	07:12	17:44 (D03)	06:47 07:20
	20:42	20:16	19:30	4 18:01 (D03)	18:40 8	17:52 (D03)	16:57 16:40
10	05:45	06:12	19:10 (D02)	06:43	17:51 (D03)	07:13	06:48 07:21
	20:42	20:15	7 19:17 (D02)	19:28	16 18:07 (D03)	18:38	16:56 16:40
11	05:46	06:13	19:06 (D02)	06:44	17:47 (D03)	07:14	06:50 07:22
	20:41	20:14	14 19:20 (D02)	19:26	23 18:10 (D03)	18:36	16:55 16:40
12	05:46	06:14	19:04 (D02)	06:45	17:44 (D03)	07:15	06:51 07:23
	20:41	20:12	18 19:22 (D02)	19:25	28 18:12 (D03)	18:35	16:54 16:40
13	05:47	06:15	19:01 (D02)	06:46	17:42 (D03)	07:16	06:52 07:23
	20:40	20:11	21 19:22 (D02)	19:23	31 18:13 (D03)	18:33	16:53 16:40
14	05:48	06:16	19:00 (D02)	06:47	17:40 (D03)	07:17	06:53 07:24
	20:40	20:10	23 19:23 (D02)	19:21	34 18:14 (D03)	18:32	16:52 16:40
15	05:49	06:17	18:59 (D02)	06:48	17:39 (D03)	07:19	06:54 07:25
	20:39	20:08	25 19:24 (D02)	19:20	36 18:15 (D03)	18:30	16:51 16:41
16	05:49	06:18	18:58 (D02)	06:49	17:37 (D03)	07:20	06:56 07:26
	20:39	20:07	27 19:25 (D02)	19:18	39 18:16 (D03)	18:28	16:50 16:41
17	05:50	06:19	18:57 (D02)	06:50	17:36 (D03)	07:21	06:57 07:26
	20:38	20:06	29 19:26 (D02)	19:16	41 18:17 (D03)	18:27	16:49 16:41
18	05:51	06:20	18:56 (D02)	06:51	17:35 (D03)	07:22	06:58 07:27
	20:37	20:04	30 19:26 (D02)	19:15	42 18:17 (D03)	18:25	16:49 16:41
19	05:52	06:21	18:56 (D02)	06:52	17:34 (D03)	07:23	06:59 07:28
	20:37	20:03	30 19:26 (D02)	19:13	43 18:17 (D03)	18:24	16:48 16:42
20	05:53	06:22	18:55 (D02)	06:53	17:32 (D03)	07:24	07:00 07:28
	20:36	20:01	31 19:26 (D02)	19:11	44 18:16 (D03)	18:22	16:47 16:42
21	05:54	06:23	18:55 (D02)	06:54	17:31 (D03)	07:25	07:01 07:29
	20:35	20:00	31 19:26 (D02)	19:10	45 18:16 (D03)	18:21	16:46 16:43
22	05:54	06:24	18:54 (D02)	06:55	17:30 (D03)	07:26	07:03 07:29
	20:35	19:58	32 19:26 (D02)	19:08	46 18:16 (D03)	18:20	16:46 16:43
23	05:55	06:25	18:54 (D02)	06:56	17:30 (D03)	07:27	07:04 07:30
	20:34	19:57	32 19:26 (D02)	19:06	46 18:16 (D03)	18:18	16:45 16:43
24	05:56	06:26	18:54 (D02)	06:57	17:29 (D03)	07:29	07:05 07:30
	20:33	19:55	31 19:25 (D02)	19:04	47 18:16 (D03)	18:17	16:44 16:44
25	05:57	06:27	18:54 (D02)	06:58	17:29 (D03)	07:30	07:06 07:31
	20:32	19:54	31 19:25 (D02)	19:03	46 18:15 (D03)	18:15	16:44 16:45
26	05:58	06:28	18:55 (D02)	06:59	17:28 (D03)	07:31	07:07 07:31
	20:31	19:52	29 19:24 (D02)	19:01	47 18:15 (D03)	18:14	16:43 16:45
27	05:59	06:29	18:55 (D02)	07:00	17:28 (D03)	07:32	07:08 07:31
	20:30	19:51	28 19:23 (D02)	18:59	46 18:14 (D03)	18:13	16:43 16:46
28	06:00	06:30	18:55 (D02)	07:01	17:28 (D03)	07:33	07:09 07:32
	20:29	19:49	27 19:22 (D02)	18:58	45 18:13 (D03)	18:11	16:42 16:46
29	06:01	06:31	18:56 (D02)	07:02	17:28 (D03)	07:34	07:10 07:32
	20:28	19:48	25 19:21 (D02)	18:56	45 18:13 (D03)	18:10	16:42 16:47
30	06:02	06:32	18:57 (D02)	07:03	17:28 (D03)	07:35	07:11 07:32
	20:27	19:46	22 19:19 (D02)	18:54	44 18:12 (D03)	18:09	16:42 16:48
31	06:03	06:33	18:59 (D02)			07:37	
	20:26	19:45	18 19:17 (D02)			18:07	16:49
Potential sun hours	458	428	375	346		298	288

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

Shadow receptor: 49 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (49)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.93	0.84	0.61	0.47

Operational time

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760	

	January	February	March	April	May	June
1	07:33	07:19	06:43	06:52	17:51 (D03)	06:07
	16:50	17:23	17:57	19:31	24 18:15 (D03)	20:03
2	07:33	07:18	06:41	06:51	17:53 (D03)	06:06
	16:50	17:25	17:58	19:32	18 18:11 (D03)	20:04
3	07:33	07:17	06:40	17:05 (D03)	06:49	17:58 (D03)
	16:51	17:26	18:00	17:12 (D03)	19:33	06:05
4	07:33	07:16	06:38	17:00 (D03)	06:48	18:05 (D03)
	16:52	17:27	18:01	18 17:18 (D03)	19:34	06:03
5	07:33	07:15	06:37	16:56 (D03)	06:46	19:00 (D02)
	16:53	17:28	18:02	25 17:21 (D03)	19:35	05:38
6	07:33	07:14	06:35	16:54 (D03)	06:44	19:13 (D02)
	16:54	17:30	18:03	30 17:24 (D03)	19:36	20:33
7	07:33	07:13	06:34	16:52 (D03)	06:43	19:10 (D02)
	16:55	17:31	18:04	33 17:25 (D03)	19:37	20:34
8	07:32	07:12	06:32	17:49 (D03)	06:41	19:07 (D02)
	16:56	17:32	19:05	37 18:26 (D03)	19:39	20:35
9	07:32	07:10	07:30	17:48 (D03)	06:39	19:01 (D02)
	16:57	17:33	19:06	40 18:28 (D03)	19:40	20:36
10	07:32	07:09	07:29	17:47 (D03)	06:38	19:00 (D02)
	16:58	17:35	19:07	41 18:28 (D03)	19:41	20:37
11	07:32	07:08	07:27	17:46 (D03)	06:36	19:02 (D02)
	16:59	17:36	19:09	43 18:29 (D03)	19:42	20:38
12	07:32	07:07	07:26	17:45 (D03)	06:35	19:13 (D02)
	17:00	17:37	19:10	45 18:30 (D03)	19:43	20:39
13	07:31	07:06	07:24	17:44 (D03)	06:33	19:17 (D02)
	17:01	17:38	19:11	46 18:30 (D03)	19:44	20:40
14	07:31	07:04	07:22	17:43 (D03)	06:32	19:20 (D02)
	17:02	17:39	19:12	48 18:31 (D03)	19:45	20:40
15	07:31	07:03	07:21	17:43 (D03)	06:30	19:23 (D02)
	17:03	17:41	19:13	47 18:30 (D03)	19:46	20:41
16	07:30	07:02	07:19	17:42 (D03)	06:28	19:20 (D02)
	17:04	17:42	19:14	48 18:30 (D03)	19:47	20:41
17	07:30	07:00	07:17	17:42 (D03)	06:27	19:21 (D02)
	17:05	17:43	19:15	49 18:31 (D03)	19:48	20:41
18	07:29	06:59	07:16	17:41 (D03)	06:25	19:22 (D02)
	17:07	17:44	19:16	49 18:30 (D03)	19:49	20:42
19	07:29	06:58	07:14	17:41 (D03)	06:24	19:23 (D02)
	17:08	17:46	19:17	49 18:30 (D03)	19:50	20:42
20	07:28	06:56	07:12	17:41 (D03)	06:22	19:24 (D02)
	17:09	17:47	19:18	49 18:30 (D03)	19:51	20:42
21	07:28	06:55	07:11	17:41 (D03)	06:21	19:25 (D02)
	17:10	17:48	19:19	48 18:29 (D03)	19:52	20:43
22	07:27	06:53	07:09	17:41 (D03)	06:20	19:26 (D02)
	17:11	17:49	19:21	47 18:28 (D03)	19:53	20:43
23	07:26	06:52	07:07	17:42 (D03)	06:18	19:22 (D02)
	17:12	17:50	19:22	46 18:28 (D03)	19:54	20:43
24	07:26	06:50	07:06	17:42 (D03)	06:17	19:24 (D02)
	17:14	17:51	19:23	45 18:27 (D03)	19:55	20:43
25	07:25	06:49	07:04	17:42 (D03)	06:15	19:25 (D02)
	17:15	17:53	19:24	44 18:26 (D03)	19:56	20:43
26	07:24	06:48	07:02	17:43 (D03)	06:14	19:26 (D02)
	17:16	17:54	19:25	42 18:25 (D03)	19:57	20:44
27	07:23	06:46	07:01	17:43 (D03)	06:12	19:28 (D02)
	17:17	17:55	19:26	41 18:24 (D03)	19:59	20:44
28	07:22	06:45	06:59	17:44 (D03)	06:11	19:30 (D02)
	17:18	17:56	19:27	38 18:22 (D03)	20:00	20:44
29	07:22		06:57	17:45 (D03)	06:10	19:31 (D02)
	17:20		19:28	35 18:20 (D03)	20:01	20:44
30	07:21		06:56	17:47 (D03)	06:08	19:32 (D02)
	17:21		19:29	32 18:19 (D03)	20:02	20:44
31	07:20		06:54	17:48 (D03)		19:33 (D02)
	17:22		19:30	29 18:17 (D03)		20:31 (D02)
Potential sun hours	298	297	369	398	448	452
Total, worst case			1151	606	61	
Sun reduction			0.73	0.82	0.92	
Oper. time red.			1.00	1.00	1.00	
Wind dir. red.			0.77	0.60	0.58	
Total reduction			0.56	0.49	0.54	
Total, real			650	297	33	

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)
	Sun set (hh:mm)					

SHADOW - Calendar

Shadow receptor: 49 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (49)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July	August	September	October	November	December		
1	05:40	06:04	06:34	19:01 (D02)	07:04	17:23 (D03)	06:38 07:12	
	20:44	20:25	19:43	11 19:12 (D02)	18:53 45	18:08 (D03)	18:06 16:41	
2	05:40	06:05	06:35		07:05	17:23 (D03)	06:39 07:13	
	20:44	20:24	19:41		18:51 44	18:07 (D03)	17:05 16:41	
3	05:41	06:05	06:36		07:06	17:24 (D03)	06:40 07:14	
	20:43	20:23	19:40		18:49 42	18:06 (D03)	17:04 16:41	
4	05:41	06:06	06:37		07:07	17:26 (D03)	06:41 07:15	
	20:43	20:22	19:38		18:48 40	18:01 (D03)	17:02 16:40	
5	05:42	06:07	06:38		07:08	17:26 (D03)	06:43 07:16	
	20:43	20:21	19:36		18:46 38	18:04 (D03)	17:01 16:40	
6	05:42	06:08	06:39		07:09	17:27 (D03)	06:44 07:17	
	20:43	20:20	19:35		18:44 35	18:02 (D03)	17:00 16:40	
7	05:43	06:09	06:40		07:10	17:29 (D03)	06:45 07:18	
	20:43	20:19	19:33		18:43 31	18:00 (D03)	16:59 16:40	
8	05:44	06:10	06:41		07:11	17:30 (D03)	06:46 07:19	
	20:42	20:17	19:31		18:41 28	17:58 (D03)	16:58 16:40	
9	05:44	06:11	19:08 (D02)	06:42	17:53 (D03)	07:12	17:33 (D03) 06:47 07:20	
	20:42	20:16	10 19:18 (D02)	19:30 5	17:58 (D03)	18:40 22	17:55 (D03) 16:57 16:40	
10	05:45	06:12	19:05 (D02)	06:43	17:46 (D03)	07:13	17:36 (D03) 06:48 07:21	
	20:42	20:15	16 19:21 (D02)	19:28 18	18:04 (D03)	18:38 15	17:51 (D03) 16:56 16:40	
11	05:46	06:13	19:03 (D02)	06:44	17:43 (D03)	07:14		06:50 07:22
	20:41	20:14	20 19:23 (D02)	19:26 24	18:07 (D03)	18:36		16:55 16:40
12	05:46	06:14	19:02 (D02)	06:45	17:40 (D03)	07:15		06:51 07:23
	20:41	20:12	22 19:24 (D02)	19:25 28	18:08 (D03)	18:35		16:54 16:40
13	05:47	06:15	18:59 (D02)	06:46	17:38 (D03)	07:16		06:52 07:23
	20:40	20:11	25 19:24 (D02)	19:23 32	18:10 (D03)	18:33		16:53 16:40
14	05:48	06:16	18:58 (D02)	06:47	17:36 (D03)	07:17		06:53 07:24
	20:40	20:10	27 19:25 (D02)	19:21 35	18:11 (D03)	18:32		16:52 16:40
15	05:49	06:17	18:57 (D02)	06:48	17:34 (D03)	07:19		06:54 07:25
	20:39	20:08	28 19:25 (D02)	19:20 38	18:12 (D03)	18:30		16:51 16:41
16	05:49	06:18	18:56 (D02)	06:49	17:33 (D03)	07:20		06:56 07:26
	20:39	20:07	30 19:26 (D02)	19:18 40	18:13 (D03)	18:28		16:50 16:41
17	05:50	06:19	18:56 (D02)	06:50	17:31 (D03)	07:21		06:57 07:26
	20:38	20:06	30 19:26 (D02)	19:16 42	18:13 (D03)	18:27		16:49 16:41
18	05:51	06:20	18:55 (D02)	06:51	17:30 (D03)	07:22		06:58 07:27
	20:37	20:04	32 19:27 (D02)	19:15 44	18:14 (D03)	18:25		16:49 16:41
19	05:52	06:21	18:55 (D02)	06:52	17:29 (D03)	07:23		06:59 07:28
	20:37	20:03	32 19:27 (D02)	19:13 45	18:14 (D03)	18:24		16:48 16:42
20	05:53	06:22	18:54 (D02)	06:53	17:27 (D03)	07:24		07:00 07:28
	20:36	20:01	33 19:27 (D02)	19:11 46	18:13 (D03)	18:22		16:47 16:42
21	05:54	06:23	18:54 (D02)	06:54	17:26 (D03)	07:25		07:01 07:29
	20:35	20:00	33 19:27 (D02)	19:10 47	18:13 (D03)	18:21		16:46 16:43
22	05:54	06:24	18:54 (D02)	06:55	17:25 (D03)	07:26		07:03 07:29
	20:35	19:58	32 19:26 (D02)	19:08 48	18:13 (D03)	18:20		16:46 16:43
23	05:55	06:25	18:54 (D02)	06:56	17:25 (D03)	07:27		07:04 07:30
	20:34	19:57	32 19:26 (D02)	19:06 48	18:13 (D03)	18:18		16:45 16:43
24	05:56	06:26	18:54 (D02)	06:57	17:24 (D03)	07:29		07:05 07:30
	20:33	19:55	31 19:25 (D02)	19:04 49	18:13 (D03)	18:17		16:44 16:44
25	05:57	06:27	18:54 (D02)	06:58	17:24 (D03)	07:30		07:06 07:31
	20:32	19:54	31 19:25 (D02)	19:03 49	18:13 (D03)	18:15		16:44 16:45
26	05:58	06:28	18:54 (D02)	06:59	17:23 (D03)	07:31		07:07 07:31
	20:31	19:52	30 19:24 (D02)	19:01 49	18:12 (D03)	18:14		16:43 16:45
27	05:59	06:29	18:55 (D02)	07:00	17:23 (D03)	07:32		07:08 07:31
	20:30	19:51	28 19:23 (D02)	18:59 49	18:12 (D03)	18:13		16:43 16:46
28	06:00	06:30	18:55 (D02)	07:01	17:23 (D03)	07:33		07:09 07:32
	20:29	19:49	27 19:22 (D02)	18:58 48	18:11 (D03)	18:11		16:42 16:46
29	06:01	06:31	18:56 (D02)	07:02	17:23 (D03)	07:34		07:10 07:32
	20:28	19:48	24 19:20 (D02)	18:56 47	18:10 (D03)	18:10		16:42 16:47
30	06:02	06:32	18:57 (D02)	07:03	17:23 (D03)	07:35		07:11 07:32
	20:27	19:46	22 19:19 (D02)	18:54 46	18:09 (D03)	18:09		16:42 16:48
31	06:03	06:33	18:59 (D02)			07:37		07:32
	20:26	19:45	18 19:17 (D02)			18:07		16:49
Potential sun hours	458	428		375		346		298 288

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

Shadow receptor: 50 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (50)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March	April	May	June										
1	07:32		07:19	16:25 (D04)	06:43	06:52		06:07	18:47 (D03)	05:39		19:36 (D02)				
	16:50		17:23	25	16:50 (D04)	17:57	19:31		20:03	36	19:23 (D03)	20:32	10	19:46 (D02)		
2	07:33		07:18	16:25 (D04)	06:41	06:51		06:06	18:47 (D03)	05:38		19:38 (D02)				
	16:50		17:25	25	16:50 (D04)	17:58	19:32		20:04	36	19:23 (D03)	20:33	7	19:45 (D02)		
3	07:33		07:17	16:26 (D04)	06:40	06:49		06:05	18:47 (D03)	05:38						
	16:51		17:26	23	16:49 (D04)	18:00	19:33		20:05	34	19:21 (D03)	20:34				
4	07:33		07:16	16:27 (D04)	06:38	06:48		06:03	18:47 (D03)	05:38						
	16:52		17:27	22	16:49 (D04)	18:01	19:34		20:06	34	19:21 (D03)	20:34				
5	07:33		07:15	16:29 (D04)	06:37	06:46		06:02	18:48 (D03)	05:37						
	16:53		17:28	19	16:48 (D04)	18:02	19:35		20:07	40	19:44 (D02)	20:35				
6	07:33		07:14	16:30 (D04)	06:35	06:44		06:01	18:49 (D03)	05:37						
	16:54		17:30	17	16:47 (D04)	18:03	19:36		20:08	42	19:46 (D02)	20:36				
7	07:33		07:13	16:33 (D04)	06:34	06:43		06:00	18:50 (D03)	05:37						
	16:55		17:31	12	16:45 (D04)	18:04	19:37		20:09	43	19:47 (D02)	20:36				
8	07:32		07:12	16:37 (D04)	07:32	06:41		05:59								
	16:56		17:32	5	16:42 (D04)	19:05	19:38		20:10	43	19:48 (D02)	20:37				
9	07:32		07:10			07:30	06:39	05:57								
	16:57		17:33			19:06	19:40	20:11	42	19:49 (D02)	20:38					
10	07:32		07:09			19:07	19:41	05:56								
	16:58		17:35			19:07	19:41	20:12	42	19:49 (D02)	20:38					
11	07:32		07:08			19:07	19:41	05:55								
	16:59		17:36			19:09	19:42	20:13	39	19:50 (D02)	20:39					
12	07:32		07:07			19:09	19:42	05:54								
	17:00		17:37			19:10	19:43	20:14	35	19:51 (D02)	20:39					
13	07:31		07:06			19:11	19:44	05:53								
	17:01		17:38			19:11	19:44	20:15	25	19:52 (D02)	20:40					
14	07:31	16:29 (D04)	07:04			19:22	06:32	19:01 (D03)	05:52							
	17:02	6	16:35 (D04)	17:39		19:12	19:45	14	19:15 (D03)	20:16	25	19:53 (D02)	20:40			
15	07:31		16:28 (D04)	07:03		19:21	06:30	18:58 (D03)	05:51							
	17:03	11	16:39 (D04)	17:41		19:13	19:46	19	19:17 (D03)	20:17	27	19:54 (D02)	20:41			
16	07:30		16:26 (D04)	07:02		19:19	06:28	18:56 (D03)	05:50							
	17:04	13	16:39 (D04)	17:42		19:14	19:47	23	19:19 (D03)	20:18	27	19:54 (D02)	20:41			
17	07:30		16:26 (D04)	07:00		19:17	06:27	18:53 (D03)	05:49							
	17:05	15	16:41 (D04)	17:43		19:15	19:48	27	19:20 (D03)	20:19	27	19:54 (D02)	20:41			
18	07:29		16:24 (D04)	06:59		19:16	06:25	18:52 (D03)	05:48							
	17:07	18	16:42 (D04)	17:44		19:16	19:49	30	19:22 (D03)	20:20	26	19:53 (D02)	20:42			
19	07:29		16:25 (D04)	06:58		19:14	06:24	18:51 (D03)	05:47							
	17:08	19	16:44 (D04)	17:46		19:17	19:50	31	19:22 (D03)	20:21	26	19:53 (D02)	20:42			
20	07:28		16:24 (D04)	06:56		19:12	06:22	18:50 (D03)	05:47							
	17:09	21	16:45 (D04)	17:47		19:18	19:51	33	19:23 (D03)	20:22	26	19:53 (D02)	20:42			
21	07:28		16:24 (D04)	06:55		19:11	06:21	18:48 (D03)	05:46							
	17:10	22	16:46 (D04)	17:48		19:19	19:52	35	19:23 (D03)	20:23	25	19:53 (D02)	20:43			
22	07:27		16:23 (D04)	06:53		19:09	06:19	18:48 (D03)	05:45							
	17:11	24	16:47 (D04)	17:49		19:21	19:53	36	19:24 (D03)	20:24	25	19:53 (D02)	20:43			
23	07:26		16:23 (D04)	06:52		19:07	06:18	18:47 (D03)	05:44							
	17:12	25	16:48 (D04)	17:50		19:22	19:54	37	19:24 (D03)	20:25	24	19:52 (D02)	20:43			
24	07:26		16:23 (D04)	06:50		19:06	06:17	18:47 (D03)	05:43							
	17:14	25	16:48 (D04)	17:51		19:23	19:55	37	19:24 (D03)	20:26	22	19:52 (D02)	20:43			
25	07:25		16:23 (D04)	06:49		19:04	06:15	18:47 (D03)	05:43							
	17:15	27	16:50 (D04)	17:53		19:24	19:56	38	19:25 (D03)	20:26	22	19:52 (D02)	20:43			
26	07:24		16:23 (D04)	06:48		19:02	06:14	18:46 (D03)	05:42							
	17:16	27	16:50 (D04)	17:54		19:25	19:57	38	19:24 (D03)	20:27	21	19:51 (D02)	20:44			
27	07:23		16:23 (D04)	06:46		19:01	06:12	18:46 (D03)	05:41							
	17:17	27	16:50 (D04)	17:55		19:26	19:59	38	19:24 (D03)	20:28	20	19:51 (D02)	20:44			
28	07:22		16:23 (D04)	06:45		06:59	06:11	18:46 (D03)	05:41							
	17:18	27	16:50 (D04)	17:56		19:27	20:00	38	19:24 (D03)	20:29	18	19:50 (D02)	20:44			
29	07:22		16:23 (D04)			06:57	06:10	18:46 (D03)	05:40							
	17:20	28	16:51 (D04)			19:28	20:01	37	19:23 (D03)	20:30	17	19:50 (D02)	20:44			
30	07:21		16:24 (D04)			06:56	06:08	18:46 (D03)	05:40							
	17:21	27	16:51 (D04)			19:29	20:02	37	19:23 (D03)	20:31	14	19:48 (D02)	20:44			
31	07:20		16:24 (D04)			06:54				05:39						
	17:22	26	16:50 (D04)			19:30				20:31	13	19:48 (D02)		452		
Potential sun hours	298		297			369	398			448						
Total, worst case	388		148			548				896					17	
Sun reduction	0.45		0.62			0.82				0.92					0.94	
Oper. time red.	1.00		1.00			1.00				1.00					1.00	
Wind dir. red.	0.87		0.87			0.56				0.52					0.50	
Total reduction	0.41		0.57			0.49				0.50					0.49	
Total, real	160		84			267				452					8	

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

Shadow receptor: 50 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (50)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July		August		September	October		November		December						
1	05:40		06:04		19:07 (D03)	06:34		07:04		06:38						07:12
	20:44		20:25	37	20:01 (D02)	19:43		18:53		18:06						16:41
2	05:40		06:05		19:05 (D03)	06:35		07:05		06:39						07:13
	20:44		20:24	39	20:00 (D02)	19:41		18:51		17:05						16:41
3	05:41		06:05		19:03 (D03)	06:36		07:06		06:40						16:04 (D04)
	20:43		20:23	42	19:59 (D02)	19:40		18:49		17:04	7	16:11 (D04)				16:41
4	05:41		06:06		19:02 (D03)	06:37		07:07		06:41						16:02 (D04)
	20:43		20:22	42	19:58 (D02)	19:38		18:48		17:02	13	16:15 (D04)				07:15
5	05:42		06:07		19:01 (D03)	06:38		07:08		06:43						16:00 (D04)
	20:43		20:21	42	19:57 (D02)	19:36		18:46		17:01	17	16:17 (D04)				16:40
6	05:42		06:08		18:59 (D03)	06:39		07:09		06:44						15:58 (D04)
	20:43		20:20	43	19:56 (D02)	19:35		18:44		17:00	20	16:18 (D04)				16:40
7	05:43		06:09		18:59 (D03)	06:40		07:10		06:45						15:57 (D04)
	20:43		20:19	41	19:55 (D02)	19:33		18:43		16:59	22	16:19 (D04)				07:18
8	05:44		06:10		18:58 (D03)	06:41		07:11		06:46						15:57 (D04)
	20:42		20:17	39	19:54 (D02)	19:31		18:41		16:58	23	16:20 (D04)				07:19
9	05:44		06:11		18:57 (D03)	06:42		07:12		06:47						15:56 (D04)
	20:42		20:16	34	19:31 (D03)	19:30		18:39		16:57	25	16:21 (D04)				16:40
10	05:45	19:47 (D02)	06:12		18:56 (D03)	06:43		07:13		06:48						15:56 (D04)
	20:42	4	19:51 (D02)	20:15	35	19:31 (D03)	19:28		18:38		16:56	25	16:21 (D04)			16:40
11	05:46	19:45 (D02)	06:13		18:56 (D03)	06:44		07:14		06:50						15:56 (D04)
	20:41	9	19:54 (D02)	20:14	35	19:31 (D03)	19:26		18:36		16:55	26	16:22 (D04)			16:40
12	05:46	19:44 (D02)	06:14		18:55 (D03)	06:45		07:15		06:51						15:56 (D04)
	20:41	12	19:56 (D02)	20:12	37	19:32 (D03)	19:25		18:35		16:54	26	16:22 (D04)			16:40
13	05:47	19:43 (D02)	06:15		18:54 (D03)	06:46		07:16		06:52						15:55 (D04)
	20:40	13	19:56 (D02)	20:11	37	19:31 (D03)	19:23		18:33		16:53	27	16:22 (D04)			16:40
14	05:48	19:42 (D02)	06:16		18:53 (D03)	06:47		07:17		06:53						15:55 (D04)
	20:40	16	19:58 (D02)	20:10	38	19:31 (D03)	19:21		18:32		16:52	27	16:22 (D04)			16:40
15	05:49	19:42 (D02)	06:17		18:53 (D03)	06:48		07:19		06:54						15:56 (D04)
	20:39	17	19:59 (D02)	20:08	38	19:31 (D03)	19:20		18:30		16:51	27	16:23 (D04)			16:41
16	05:49	19:41 (D02)	06:18		18:53 (D03)	06:49		07:20		06:56						15:56 (D04)
	20:39	19	20:00 (D02)	20:07	38	19:31 (D03)	19:18		18:28		16:50	27	16:23 (D04)			16:41
17	05:50	19:40 (D02)	06:19		18:53 (D03)	06:50		07:21		06:57						15:56 (D04)
	20:38	20	20:00 (D02)	20:06	38	19:31 (D03)	19:16		18:27		16:49	27	16:23 (D04)			16:41
18	05:51	19:40 (D02)	06:20		18:53 (D03)	06:51		07:22		06:58						15:57 (D04)
	20:37	21	20:01 (D02)	20:04	37	19:30 (D03)	19:15		18:25		16:48	25	16:22 (D04)			16:41
19	05:52	19:39 (D02)	06:21		18:53 (D03)	06:52		07:23		06:59						15:58 (D04)
	20:37	23	20:02 (D02)	20:03	37	19:30 (D03)	19:13		18:24		16:48	25	16:23 (D04)			16:42
20	05:53	19:39 (D02)	06:22		18:53 (D03)	06:53		07:24		07:00						15:58 (D04)
	20:36	23	20:02 (D02)	20:01	36	19:29 (D03)	19:11		18:22		16:47	24	16:22 (D04)			16:42
21	05:54	19:39 (D02)	06:23		18:53 (D03)	06:54		07:25		07:01						15:59 (D04)
	20:35	24	20:03 (D02)	20:00	36	19:29 (D03)	19:10		18:21		16:46	22	16:21 (D04)			16:43
22	05:54	19:38 (D02)	06:24		18:53 (D03)	06:55		07:26		07:03						16:00 (D04)
	20:35	24	20:02 (D02)	19:58	35	19:28 (D03)	19:08		18:20		16:46	21	16:21 (D04)			16:43
23	05:55	19:38 (D02)	06:25		18:54 (D03)	06:56		07:27		07:04						16:01 (D04)
	20:34	25	20:03 (D02)	19:57	33	19:27 (D03)	19:06		18:18		16:45	19	16:20 (D04)			16:43
24	05:56	19:38 (D02)	06:26		18:54 (D03)	06:57		07:29		07:05						16:02 (D04)
	20:33	25	20:03 (D02)	19:55	32	19:26 (D03)	19:04		18:17		16:44	18	16:20 (D04)			16:44
25	05:57	19:38 (D02)	06:27		18:55 (D03)	06:58		07:30		07:06						16:04 (D04)
	20:32	26	20:04 (D02)	19:54	30	19:25 (D03)	19:03		18:15		16:44	15	16:19 (D04)			16:45
26	05:58	19:38 (D02)	06:28		18:56 (D03)	06:59		07:31		07:07						16:05 (D04)
	20:31	26	20:04 (D02)	19:52	27	19:23 (D03)	19:01		18:14		16:43	13	16:18 (D04)			16:45
27	05:59	19:38 (D02)	06:29		18:58 (D03)	07:00		07:32		07:08						16:07 (D04)
	20:30	26	20:04 (D02)	19:51	23	19:21 (D03)	18:59		18:13		16:43	11	16:18 (D04)			16:46
28	06:00	19:38 (D02)	06:30		19:00 (D03)	07:01		07:33		07:09						16:09 (D04)
	20:29	26	20:04 (D02)	19:49	19	19:19 (D03)	18:58		18:11		16:42	7	16:16 (D04)			16:46
29	06:01	19:37 (D02)	06:31		19:03 (D03)	07:02		07:34		07:10						16:32
	20:28	26	20:03 (D02)	19:48	13	19:16 (D03)	18:56		18:10		16:42					16:47
30	06:02	19:37 (D02)	06:32					07:03		07:35		07:11				07:32
	20:27	26	20:03 (D02)	19:46				07:04		18:09		16:42				16:48
31	06:03	19:37 (D02)	06:33					07:05		07:37						07:32
	20:26	30	20:02 (D02)	19:45				07:06		18:07						16:49
Potential sun hours	458		428			375		346		298						288
Total, worst case	461		1013							539						
Sun reduction	0.97		0.96							0.61						
Oper. time red.	1.00		1.00							1.00						
Wind dir. red.	0.50		0.56							0.87						
Total reduction	0.51		0.56							0.56						
Total, real	234		568							301						

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

Shadow receptor: 51 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (51)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March		April		May		June								
1	07:32	16:05 (D04)	07:19	06:43	06:52	18:26 (D03)	06:07	19:08 (D02)	05:39								
	16:50	19	16:24 (D04)	17:23	19:31	34	19:00 (D03)	20:03	22	19:30 (D02)	20:32						
2	07:33	16:05 (D04)	07:18	06:41	06:51	18:25 (D03)	06:06	19:09 (D02)	05:38								
	16:50	20	16:25 (D04)	17:25	19:32	35	19:03 (D03)	20:04	20	19:29 (D02)	20:33						
3	07:33	16:05 (D04)	07:17	06:40	06:49	18:25 (D03)	06:05	19:09 (D02)	05:38								
	16:51	21	16:26 (D04)	17:26	19:33	34	18:59 (D03)	20:05	18	19:27 (D02)	20:34						
4	07:33	16:05 (D04)	07:16	06:38	06:48	18:25 (D03)	06:03	19:10 (D02)	05:38								
	16:52	21	16:26 (D04)	17:27	19:34	35	19:01 (D03)	20:06	16	19:26 (D02)	20:34						
5	07:33	16:06 (D04)	07:15	06:37	06:46	18:24 (D03)	06:02	19:12 (D02)	05:37								
	16:53	21	16:27 (D04)	17:28	19:35	35	18:59 (D03)	20:07	12	19:24 (D02)	20:35						
6	07:33	16:06 (D04)	07:14	06:35	06:44	18:24 (D03)	06:01	19:15 (D02)	05:37								
	16:54	22	16:28 (D04)	17:30	19:36	34	18:58 (D03)	20:08	6	19:21 (D02)	20:36						
7	07:33	16:06 (D04)	07:13	06:34	06:43	18:25 (D03)	06:00										
	16:55	23	16:29 (D04)	17:31	19:37	33	18:58 (D03)	20:09									
8	07:32	16:05 (D04)	07:12	07:32	06:41	18:25 (D03)	05:59										
	16:56	24	16:29 (D04)	17:32	19:38	32	18:57 (D03)	20:10									
9	07:32	16:06 (D04)	07:10	07:30	06:39	18:25 (D03)	05:57										
	16:57	23	16:29 (D04)	17:33	19:40	30	18:55 (D03)	20:11									
10	07:32	16:06 (D04)	07:09	07:29	06:38	18:26 (D03)	05:56										
	16:58	24	16:30 (D04)	17:35	19:41	29	18:55 (D03)	20:12									
11	07:32	16:07 (D04)	07:08	07:27	06:36	18:26 (D03)	05:55										
	16:59	24	16:31 (D04)	17:36	19:42	27	18:53 (D03)	20:13									
12	07:32	16:07 (D04)	07:07	07:26	06:35	18:28 (D03)	05:54										
	17:00	24	16:31 (D04)	17:37	19:43	24	18:52 (D03)	20:14									
13	07:31	16:07 (D04)	07:06	07:24	06:33	18:29 (D03)	05:53										
	17:01	25	16:32 (D04)	17:38	19:44	20	18:49 (D03)	20:15									
14	07:31	16:07 (D04)	07:04	07:22	06:32	18:31 (D03)	05:52										
	17:02	25	16:32 (D04)	17:39	19:45	17	18:48 (D03)	20:16									
15	07:31	16:08 (D04)	07:03	07:21	06:30	18:34 (D03)	05:51										
	17:03	24	16:32 (D04)	17:41	19:46	9	18:43 (D03)	20:17									
16	07:30	16:08 (D04)	07:02	07:19	06:28		05:50										
	17:04	24	16:32 (D04)	17:42	19:47		20:18										
17	07:30	16:09 (D04)	07:00	07:17	06:27		05:49										
	17:05	24	16:33 (D04)	17:43	19:48		20:19										
18	07:29	16:09 (D04)	06:59	07:16	06:25	19:15 (D02)	05:48										
	17:07	24	16:33 (D04)	17:44	19:49	12	19:27 (D02)	20:20									
19	07:29	16:10 (D04)	06:58	07:14	06:24	19:13 (D02)	05:47										
	17:08	23	16:33 (D04)	17:46	19:50	15	19:28 (D02)	20:21									
20	07:28	16:10 (D04)	06:56	07:12	06:22	19:11 (D02)	05:47										
	17:09	23	16:33 (D04)	17:47	19:51	19	19:30 (D02)	20:22									
21	07:28	16:12 (D04)	06:55	07:11	06:21	19:09 (D02)	05:46										
	17:10	22	16:34 (D04)	17:48	19:52	21	19:30 (D02)	20:23									
22	07:27	16:12 (D04)	06:53	07:09	06:19	19:09 (D02)	05:45										
	17:11	21	16:33 (D04)	17:49	19:53	22	19:31 (D02)	20:24									
23	07:26	16:13 (D04)	06:52	07:07	06:18	19:07 (D02)	05:44										
	17:12	19	16:32 (D04)	17:50	19:54	24	19:31 (D02)	20:25									
24	07:26	16:14 (D04)	06:50	07:06	18:40 (D03)	06:17	19:07 (D02)	05:43									
	17:14	17	16:31 (D04)	17:51	19:23	10	18:50 (D03)	19:55	25	19:32 (D02)	20:26						
25	07:25	16:16 (D04)	06:49	07:04	18:36 (D03)	06:15	19:07 (D02)	05:43									
	17:15	15	16:31 (D04)	17:53	19:24	17	18:53 (D03)	19:56	25	19:32 (D02)	20:26						
26	07:24	16:18 (D04)	06:48	07:02	18:33 (D03)	06:14	19:06 (D02)	05:42									
	17:16	12	16:30 (D04)	17:54	19:25	22	18:55 (D03)	19:57	25	19:31 (D02)	20:27						
27	07:23	16:20 (D04)	06:46	07:01	18:32 (D03)	06:12	19:06 (D02)	05:41									
	17:17	8	16:28 (D04)	17:55	19:26	25	18:57 (D03)	19:59	26	19:32 (D02)	20:28						
28	07:22		06:45	06:59	18:30 (D03)	06:11	19:07 (D02)	05:41									
	17:18			17:56	19:27	28	18:58 (D03)	20:00	25	19:32 (D02)	20:29						
29	07:22				06:57	18:28 (D03)	06:10	19:06 (D02)	05:40								
	17:20				19:28	30	18:58 (D03)	20:01	24	19:30 (D02)	20:30						
30	07:21				06:56	18:28 (D03)	06:08	19:07 (D02)	05:40								
	17:21				19:29	31	18:59 (D03)	20:02	23	19:30 (D02)	20:31						
31	07:20				06:54	18:26 (D03)											
	17:22				19:30	33	18:59 (D03)										
	Potential sun hours		298		369		398		448		452						
	Total, worst case		572		196		714		94								
	Sun reduction		0.45		0.73		0.82		0.92								
	Oper. time red.		1.00		1.00		1.00		1.00								
	Wind dir. red.		0.88		0.68		0.62		0.54								
	Total reduction		0.42		0.52		0.54		0.53								
	Total, real		239		101		383		49								

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

Shadow receptor: 51 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (51)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July	August	September	October	November	December												
1	05:40	06:04	06:34	18:25 (D03)	07:04	06:38												
	20:44	20:25	19:43	27	18:52 (D03)	18:53	18:06											
2	05:40	06:05	06:35	18:24 (D03)	07:05	06:39												
	20:44	20:24	19:41	29	18:53 (D03)	18:51	17:05											
3	05:41	06:05	06:36	18:23 (D03)	07:06	06:40												
	20:43	20:23	19:40	30	18:53 (D03)	18:49	17:04											
4	05:41	06:06	06:37	18:22 (D03)	07:07	06:41												
	20:43	20:22	19:38	32	18:54 (D03)	18:48	17:02											
5	05:42	06:07	06:38	18:21 (D03)	07:08	06:43												
	20:43	20:21	19:36	33	18:54 (D03)	18:46	17:01											
6	05:42	06:08	06:39	18:20 (D03)	07:09	06:44												
	20:43	20:20	19:35	34	18:54 (D03)	18:44	17:00											
7	05:43	06:09	19:23 (D02)	06:40	18:19 (D03)	07:10	06:45											
	20:43	20:19	9	19:32 (D02)	19:33	35	18:54 (D03)	18:43	16:59									
8	05:44	06:10	19:21 (D02)	06:41	18:19 (D03)	07:11	06:46											
	20:42	20:17	13	19:34 (D02)	19:31	35	18:54 (D03)	18:41	16:58									
9	05:44	06:11	19:19 (D02)	06:42	18:19 (D03)	07:12	06:47											
	20:42	20:16	17	19:36 (D02)	19:30	34	18:53 (D03)	18:39	16:57									
10	05:45	06:12	19:18 (D02)	06:43	18:18 (D03)	07:13	06:48											
	20:42	20:15	19	19:37 (D02)	19:28	35	18:53 (D03)	18:38	16:56									
11	05:46	06:13	19:17 (D02)	06:44	18:18 (D03)	07:14	06:50											
	20:41	20:14	21	19:38 (D02)	19:26	34	18:52 (D03)	18:36	16:55									
12	05:46	06:14	19:16 (D02)	06:45	18:18 (D03)	07:15	06:51											
	20:41	20:12	22	19:38 (D02)	19:25	34	18:52 (D03)	18:35	16:54									
13	05:47	06:15	19:14 (D02)	06:46	18:19 (D03)	07:16	06:52											
	20:40	20:11	24	19:38 (D02)	19:23	32	18:51 (D03)	18:33	16:53									
14	05:48	06:16	19:14 (D02)	06:47	18:19 (D03)	07:17	06:53											
	20:40	20:10	24	19:38 (D02)	19:21	30	18:49 (D03)	18:32	16:52									
15	05:49	06:17	19:13 (D02)	06:48	18:20 (D03)	07:19	06:54		15:53 (D04)	07:25								
	20:39	20:08	25	19:38 (D02)	19:20	28	18:48 (D03)	18:30	16:51	8	16:01 (D04)	16:41	17	16:15 (D04)				
16	05:49	06:18	19:13 (D02)	06:49	18:21 (D03)	07:20	06:56		15:50 (D04)	07:26								
	20:39	20:07	25	19:38 (D02)	19:18	26	18:47 (D03)	18:28	16:50	13	16:03 (D04)	16:41	16	16:15 (D04)				
17	05:50	06:19	19:13 (D02)	06:50	18:22 (D03)	07:21	06:57		15:49 (D04)	07:26								
	20:38	20:06	25	19:38 (D02)	19:16	23	18:45 (D03)	18:27	16:49	15	16:04 (D04)	16:41	16	16:15 (D04)				
18	05:51	06:20	19:13 (D02)	06:51	18:24 (D03)	07:22	06:58		15:48 (D04)	07:27								
	20:37	20:04	25	19:38 (D02)	19:15	18	18:42 (D03)	18:25	16:48	17	16:05 (D04)	16:41	16	16:16 (D04)				
19	05:52	06:21	19:13 (D02)	06:52	18:26 (D03)	07:23	06:59		15:48 (D04)	07:28								
	20:37	20:03	24	19:37 (D02)	19:13	12	18:38 (D03)	18:24	16:48	19	16:07 (D04)	16:42	15	16:16 (D04)				
20	05:53	06:22	19:13 (D02)	06:53			07:24	07:00	15:47 (D04)	07:28								
	20:36	20:01	24	19:37 (D02)	19:11		18:22	16:47	21	16:08 (D04)	16:42	15	16:16 (D04)					
21	05:54	06:23	19:14 (D02)	06:54			07:25	07:01	15:47 (D04)	07:29								
	20:35	20:00	22	19:36 (D02)	19:10		18:21	16:46	22	16:09 (D04)	16:43	15	16:17 (D04)					
22	05:54	06:24	19:14 (D02)	06:55			07:26	07:03	15:46 (D04)	07:29								
	20:35	20:58	21	19:35 (D02)	19:08		18:20	16:46	23	16:09 (D04)	16:43	15	16:17 (D04)					
23	05:55	06:25	19:15 (D02)	06:56			07:27	07:04	15:46 (D04)	07:30								
	20:34	19:57	19	19:34 (D02)	19:06		18:18	16:45	23	16:09 (D04)	16:43	15	16:18 (D04)					
24	05:56	06:26	19:17 (D02)	06:57			07:29	07:05	15:47 (D04)	07:30								
	20:33	19:55	15	19:32 (D02)	19:04		18:17	16:44	24	16:11 (D04)	16:44	15	16:18 (D04)					
25	05:57	06:27	19:19 (D02)	06:58			07:30	07:06	15:47 (D04)	07:31								
	20:32	19:54	10	19:29 (D02)	19:03		18:15	16:44	24	16:11 (D04)	16:45	16	16:19 (D04)					
26	05:58	06:28		06:59			07:31	07:07	15:47 (D04)	07:31								
	20:31	19:52		19:01			18:14	16:43	24	16:11 (D04)	16:45	16	16:20 (D04)					
27	05:59	06:29		07:00			07:32	07:08	15:47 (D04)	07:31								
	20:30	19:51		18:59			18:13	16:43	25	16:12 (D04)	16:46	16	16:20 (D04)					
28	06:00	06:30	18:36 (D03)	07:01			07:33	07:09	15:47 (D04)	07:32								
	20:29	19:49	10	18:46 (D03)	18:58		18:11	16:42	25	16:12 (D04)	16:46	17	16:21 (D04)					
29	06:01	06:31	18:32 (D03)	07:02			07:34	07:10	15:47 (D04)	07:32								
	20:28	19:48	17	18:49 (D03)	18:56		18:10	16:42	25	16:12 (D04)	16:47	17	16:21 (D04)					
30	06:02	06:32	18:30 (D03)	07:03			07:35	07:11	15:48 (D04)	07:32								
	20:27	19:46	21	18:51 (D03)	18:54		18:09	16:42	24	16:12 (D04)	16:48	18	16:23 (D04)					
31	06:03	06:33	18:28 (D03)				07:37								07:32		16:05 (D04)	
	20:26	19:45	24	18:52 (D03)			18:07								16:49	18	16:23 (D04)	
					375		346	298							288			
	Potential sun hours	458	428															
	Total, worst case		456		561				332							569		
	Sun reduction		0.96		0.93				0.61							0.47		
	Oper. time red.		1.00		1.00				1.00							1.00		
	Wind dir. red.		0.57		0.68				0.88							0.88		
	Total reduction		0.57		0.66				0.57							0.44		
	Total, real		260		370				188							248		

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	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: 52 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (52)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	January	February	March	April	May	June			
1	07:32	16:07 (D04)	07:19	06:43	06:52	18:35 (D03)	06:07		
	16:50	16:24 (D04)	17:23	17:57	19:31	19:03 (D03)	20:03		
2	07:33	16:07 (D04)	07:18	06:41	06:51	18:33 (D03)	06:06		
	16:50	16:25 (D04)	17:25	17:58	19:32	19:03 (D03)	20:04		
3	07:33	16:07 (D04)	07:17	06:40	06:49	18:31 (D03)	06:05		
	16:51	16:26 (D04)	17:26	18:00	19:33	19:03 (D03)	20:05		
4	07:33	16:07 (D04)	07:16	06:38	06:48	18:31 (D03)	06:03		
	16:52	16:27 (D04)	17:27	18:01	19:34	19:04 (D03)	20:06		
5	07:33	16:07 (D04)	07:15	06:37	06:46	18:30 (D03)	06:02		
	16:53	16:28 (D04)	17:28	18:02	19:35	19:04 (D03)	20:07		
6	07:33	16:07 (D04)	07:14	06:35	06:44	18:29 (D03)	06:01		
	16:54	16:29 (D04)	17:30	18:03	19:36	19:04 (D03)	20:08		
7	07:33	16:07 (D04)	07:13	06:34	06:43	18:29 (D03)	06:00		
	16:55	16:30 (D04)	17:31	18:04	19:37	19:05 (D03)	20:09		
8	07:32	16:07 (D04)	07:12	07:32	06:41	18:28 (D03)	05:59		
	16:56	16:30 (D04)	17:32	19:05	19:38	19:04 (D03)	20:10		
9	07:32	16:07 (D04)	07:10	07:30	06:39	18:28 (D03)	05:57		
	16:57	16:30 (D04)	17:33	19:06	19:40	19:04 (D03)	20:11		
10	07:32	16:08 (D04)	07:09	07:29	06:38	18:28 (D03)	05:56		
	16:58	16:31 (D04)	17:35	19:07	19:41	19:04 (D03)	20:12		
11	07:32	16:08 (D04)	07:08	07:27	06:36	18:27 (D03)	05:55		
	16:59	16:32 (D04)	17:36	19:09	19:42	19:03 (D03)	20:13		
12	07:32	16:08 (D04)	07:07	07:26	06:35	18:28 (D03)	05:54		
	17:00	16:32 (D04)	17:37	19:10	19:43	19:03 (D03)	20:14		
13	07:31	16:08 (D04)	07:06	07:24	06:33	18:28 (D03)	05:53		
	17:01	16:33 (D04)	17:38	19:11	19:44	19:01 (D03)	20:15		
14	07:31	16:08 (D04)	07:04	07:22	06:32	18:29 (D03)	05:52		
	17:02	16:33 (D04)	17:39	19:12	19:45	19:01 (D03)	20:16		
15	07:31	16:08 (D04)	07:03	07:21	06:30	18:29 (D03)	05:51		
	17:03	16:34 (D04)	17:41	19:13	19:46	19:00 (D03)	20:17		
16	07:30	16:08 (D04)	07:02	07:19	06:28	18:30 (D03)	05:50		
	17:04	16:34 (D04)	17:42	19:14	19:47	18:59 (D03)	20:18		
17	07:30	16:09 (D04)	07:00	07:17	06:27	18:31 (D03)	05:49		
	17:05	16:35 (D04)	17:43	19:15	19:48	18:57 (D03)	20:19		
18	07:29	16:09 (D04)	06:59	07:16	06:25	18:32 (D03)	05:48		
	17:07	16:35 (D04)	17:44	19:16	19:49	18:56 (D03)	20:20		
19	07:29	16:10 (D04)	06:58	07:14	06:24	18:33 (D03)	05:47		
	17:08	16:35 (D04)	17:46	19:17	19:50	18:53 (D03)	20:21		
20	07:28	16:10 (D04)	06:56	07:12	06:22	18:36 (D03)	05:47		
	17:09	16:35 (D04)	17:47	19:18	19:51	18:51 (D03)	20:22		
21	07:28	16:12 (D04)	06:55	07:11	06:21	18:40 (D03)	05:46		
	17:10	16:36 (D04)	17:48	19:19	19:52	19:26 (D02)	20:23		
22	07:27	16:12 (D04)	06:53	07:09	06:19	19:19 (D02)	05:45		
	17:11	16:35 (D04)	17:49	19:21	19:53	19:31 (D02)	20:24		
23	07:26	16:12 (D04)	06:52	07:07	06:18	19:16 (D02)	05:44		
	17:12	16:35 (D04)	17:50	19:22	19:54	19:32 (D02)	20:25		
24	07:26	16:13 (D04)	06:50	07:06	06:17	19:15 (D02)	05:43		
	17:14	16:34 (D04)	17:51	19:23	19:55	19:34 (D02)	20:26		
25	07:25	16:15 (D04)	06:49	07:04	06:15	19:14 (D02)	05:43		
	17:15	16:35 (D04)	17:53	19:24	19:56	19:35 (D02)	20:26		
26	07:24	16:16 (D04)	06:48	07:02	06:14	19:13 (D02)	05:42		
	17:16	16:34 (D04)	17:54	19:25	19:57	19:35 (D02)	20:27		
27	07:23	16:17 (D04)	06:46	07:01	06:12	19:12 (D02)	05:41		
	17:17	16:32 (D04)	17:55	19:26	19:59	19:36 (D02)	20:28		
28	07:22	16:19 (D04)	06:45	06:59	18:46 (D03)	06:11	19:12 (D02)	05:41	
	17:18	16:31 (D04)	17:56	19:27	7	18:53 (D03)	20:00	19:37 (D02)	20:29
29	07:22	16:23 (D04)	06:57	19:28	16	18:41 (D03)	06:10	19:11 (D02)	05:40
	17:20	16:28 (D04)	06:56	19:29	22	18:57 (D03)	20:01	19:36 (D02)	20:30
30	07:21			19:30	25	18:38 (D03)	06:08	19:11 (D02)	05:40
	17:21			19:30	22	19:00 (D03)	20:02	19:37 (D02)	20:31
31	07:20			19:30	25	19:01 (D03)		19:37 (D02)	20:31
	17:22			19:30	25			19:37 (D02)	20:31
Potential sun hours	298		297	369	398		448	452	
Total, worst case	622			70	815		228		
Sun reduction	0.45			0.73	0.82		0.92		
Oper. time red.	1.00			1.00	1.00		1.00		
Wind dir. red.	0.88			0.65	0.63		0.53		
Total reduction	0.42			0.50	0.54		0.52		
Total, real	260			35	441		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	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)

SHADOW - Calendar

Shadow receptor: 52 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (52)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

	July	August	September	October	November	December												
1	05:40	06:04	19:30 (D02)	06:34	18:26 (D03)	07:04	06:38		07:12	15:50 (D04)								
	20:44	20:25	6	19:36 (D02)	19:43	36	19:02 (D03)	18:53	18:06	16:41	24	16:14 (D04)						
2	05:40	06:05	19:27 (D02)	06:35	18:26 (D03)	07:05	06:39		07:13	15:51 (D04)								
	20:44	20:24	12	19:39 (D02)	19:41	36	19:02 (D03)	18:51	17:05	16:41	23	16:14 (D04)						
3	05:41	06:05	19:26 (D02)	06:36	18:25 (D03)	07:06	06:40		07:14	15:51 (D04)								
	20:43	20:23	14	19:40 (D02)	19:40	36	19:01 (D03)	18:49	17:04	16:41	24	16:15 (D04)						
4	05:41	06:06	19:24 (D02)	06:37	18:25 (D03)	07:07	06:41		07:15	15:52 (D04)								
	20:43	20:22	18	19:42 (D02)	19:38	36	19:01 (D03)	18:48	17:02	16:40	23	16:15 (D04)						
5	05:42	06:07	19:23 (D02)	06:38	18:25 (D03)	07:08	06:43		07:16	15:53 (D04)								
	20:43	20:21	20	19:43 (D02)	19:36	36	19:01 (D03)	18:46	17:01	16:40	22	16:15 (D04)						
6	05:42	06:08	19:22 (D02)	06:39	18:25 (D03)	07:09	06:44		07:17	15:53 (D04)								
	20:43	20:20	22	19:44 (D02)	19:35	35	19:00 (D03)	18:44	17:00	16:40	22	16:15 (D04)						
7	05:43	06:09	19:21 (D02)	06:40	18:25 (D03)	07:10	06:45		07:18	15:54 (D04)								
	20:43	20:19	23	19:44 (D02)	19:33	34	18:59 (D03)	18:43	16:59	16:40	21	16:15 (D04)						
8	05:44	06:10	19:21 (D02)	06:41	18:25 (D03)	07:11	06:46		07:19	15:54 (D04)								
	20:42	20:17	24	19:45 (D02)	19:31	34	18:59 (D03)	18:41	16:58	16:40	20	16:14 (D04)						
9	05:44	06:11	19:20 (D02)	06:42	18:25 (D03)	07:12	06:47		07:20	15:55 (D04)								
	20:42	20:16	25	19:45 (D02)	19:30	33	18:58 (D03)	18:39	16:57	16:40	19	16:14 (D04)						
10	05:45	06:12	19:20 (D02)	06:43	18:26 (D03)	07:13	06:48		07:21	15:56 (D04)								
	20:42	20:15	25	19:45 (D02)	19:28	30	18:56 (D03)	18:38	16:56	16:40	18	16:14 (D04)						
11	05:46	06:13	19:20 (D02)	06:44	18:27 (D03)	07:14	06:50		07:22	15:57 (D04)								
	20:41	20:14	25	19:45 (D02)	19:26	28	18:55 (D03)	18:36	16:55	16:40	18	16:15 (D04)						
12	05:46	06:14	19:20 (D02)	06:45	18:28 (D03)	07:15	06:51		07:23	15:58 (D04)								
	20:41	20:12	25	19:45 (D02)	19:25	25	18:53 (D03)	18:35	16:54	16:40	17	16:15 (D04)						
13	05:47	06:15	19:18 (D02)	06:46	18:29 (D03)	07:16	06:52	15:54 (D04)	07:23	15:59 (D04)								
	20:40	20:11	26	19:44 (D02)	19:23	22	18:51 (D03)	18:33	16:53	6	16:00 (D04)	16:40	16	16:15 (D04)				
14	05:48	06:16	19:19 (D02)	06:47	18:31 (D03)	07:17	06:53	15:51 (D04)	07:24	15:59 (D04)								
	20:40	20:10	25	19:44 (D02)	19:21	17	18:48 (D03)	18:32	16:52	12	16:03 (D04)	16:40	16	16:15 (D04)				
15	05:49	06:17	19:19 (D02)	06:48	18:35 (D03)	07:19	06:54	15:50 (D04)	07:25	16:00 (D04)								
	20:39	20:08	24	19:43 (D02)	19:20	9	18:44 (D03)	18:30	16:51	15	16:05 (D04)	16:41	15	16:15 (D04)				
16	05:49	06:18	19:19 (D02)	06:49			07:20	06:56	15:49 (D04)	07:26	16:01 (D04)							
	20:39	20:07	24	19:43 (D02)	19:18		18:28	16:50	18	16:07 (D04)	16:41	14	16:15 (D04)					
17	05:50	06:19	19:20 (D02)	06:50			07:21	06:57	15:48 (D04)	07:26	16:01 (D04)							
	20:38	20:06	22	19:42 (D02)	19:16		18:27	16:49	20	16:08 (D04)	16:41	14	16:15 (D04)					
18	05:51	06:20	19:20 (D02)	06:51			07:22	06:58	15:47 (D04)	07:27	16:02 (D04)							
	20:37	20:04	20	19:40 (D02)	19:15		18:25	16:48	21	16:08 (D04)	16:41	14	16:16 (D04)					
19	05:52	06:21	19:21 (D02)	06:52			07:23	06:59	15:47 (D04)	07:28	16:03 (D04)							
	20:37	20:03	18	19:39 (D02)	19:13		18:24	16:48	23	16:10 (D04)	16:42	13	16:16 (D04)					
20	05:53	06:22	19:23 (D02)	06:53			07:24	07:00	15:47 (D04)	07:28	16:03 (D04)							
	20:36	20:01	15	19:38 (D02)	19:11		18:22	16:47	23	16:10 (D04)	16:42	13	16:16 (D04)					
21	05:54	06:23	19:25 (D02)	06:54			07:25	07:01	15:47 (D04)	07:29	16:04 (D04)							
	20:35	20:00	10	19:35 (D02)	19:10		18:21	16:46	24	16:11 (D04)	16:43	13	16:17 (D04)					
22	05:54	06:24	18:44 (D03)	06:55			07:26	07:03	15:47 (D04)	07:29	16:04 (D04)							
	20:35	19:58	8	18:52 (D03)	19:08		18:20	16:46	25	16:11 (D04)	16:43	13	16:17 (D04)					
23	05:55	06:25	18:40 (D03)	06:56			07:27	07:04	15:46 (D04)	07:30	16:05 (D04)							
	20:34	19:57	15	18:55 (D03)	19:06		18:18	16:45	25	16:11 (D04)	16:43	13	16:18 (D04)					
24	05:56	06:26	18:37 (D03)	06:57			07:29	07:05	15:47 (D04)	07:30	16:05 (D04)							
	20:33	19:55	20	18:57 (D03)	19:04		18:17	16:44	26	16:13 (D04)	16:44	13	16:18 (D04)					
25	05:57	06:27	18:35 (D03)	06:58			07:30	07:06	15:47 (D04)	07:31	16:05 (D04)							
	20:32	19:54	24	18:59 (D03)	19:03		18:15	16:44	26	16:13 (D04)	16:45	14	16:19 (D04)					
26	05:58	06:28	18:33 (D03)	06:59			07:31	07:07	15:47 (D04)	07:31	16:06 (D04)							
	20:31	19:52	27	19:00 (D03)	19:01		18:14	16:43	26	16:13 (D04)	16:45	14	16:20 (D04)					
27	05:59	06:29	18:32 (D03)	07:00			07:32	07:08	15:48 (D04)	07:31	16:06 (D04)							
	20:30	19:51	29	19:01 (D03)	18:59		18:13	16:43	25	16:13 (D04)	16:46	14	16:20 (D04)					
28	06:00	06:30	18:31 (D03)	07:01			07:33	07:09	15:48 (D04)	07:32	16:06 (D04)							
	20:29	19:49	31	19:02 (D03)	18:58		18:11	16:42	25	16:13 (D04)	16:46	15	16:21 (D04)					
29	06:01	06:31	18:30 (D03)	07:02			07:34	07:10	15:48 (D04)	07:32	16:06 (D04)							
	20:28	19:48	32	19:02 (D03)	18:56		18:10	16:42	25	16:13 (D04)	16:47	15	16:21 (D04)					
30	06:02	06:32	18:29 (D03)	07:03			07:35	07:11	15:49 (D04)	07:32	16:07 (D04)							
	20:27	19:46	33	19:02 (D03)	18:54		18:09	16:42	24	16:13 (D04)	16:48	16	16:23 (D04)					
31	06:03	06:33	18:28 (D03)				07:37					07:32		16:07 (D04)				
	20:26	19:45	35	19:03 (D03)			18:07					16:49	17	16:24 (D04)				
Potential sun hours	458	428		375			346	298				288						
Total, worst case		677		447				389				523						
Sun reduction		0.96		0.93				0.61				0.47						
Oper. time red.		1.00		1.00				1.00				1.00						
Wind dir. red.		0.58		0.65				0.88				0.88						
Total reduction		0.59		0.64				0.57				0.44						
Total, real		397		286				221				22						

Project:

2019-12-01_Fountain Wind_SFA

Licensed user:

EDR

217 Montgomery St., Suite 1000

US-SYRACUSE, NY 13202

(315) 471 0688

Calculated:

12/12/2019 7:28 PM/3.2.744

SHADOW - Calendar

Shadow receptor: 57 - Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (57)

Assumptions for shadow calculations

Sunshine probability S/SO (Sun hours/Possible sun hours) []

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761	99	19	10	13	8,760

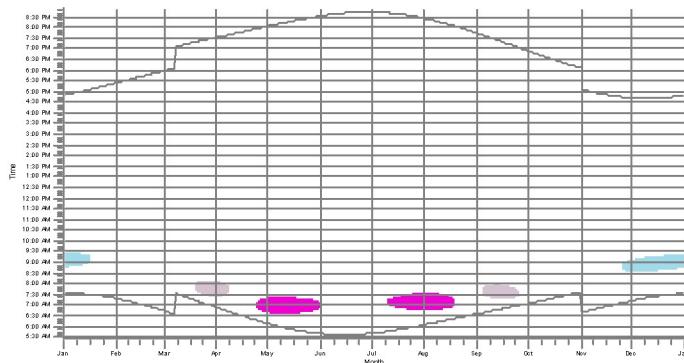
	January	February	March	April	May	June	July	August	September	October	November	December								
1	07:32	07:19	06:43	06:52	06:07	18:52 (D05)	05:39	18:47 (D05)	05:40	18:56 (D05)	06:04	18:55 (D05)	06:34	07:04	06:38	07:12				
2	07:33	07:18	06:41	06:51	06:06	18:51 (D05)	05:38	18:48 (D05)	05:40	18:55 (D05)	06:05	18:55 (D05)	06:35	07:05	06:39	07:13				
3	07:33	07:17	06:40	06:49	06:05	18:49 (D05)	05:38	18:48 (D05)	05:41	18:56 (D05)	06:06	18:55 (D05)	06:36	07:06	06:40	07:14				
4	07:33	07:16	06:38	06:48	06:03	18:49 (D05)	05:38	18:48 (D05)	05:41	18:56 (D05)	06:06	18:56 (D05)	06:37	07:07	06:41	07:15				
5	07:33	07:15	06:37	06:46	06:02	18:48 (D05)	05:37	18:49 (D05)	05:42	18:56 (D05)	06:07	18:56 (D05)	06:38	07:08	06:43	07:16				
6	07:33	07:14	06:35	06:44	06:01	18:47 (D05)	05:37	18:50 (D05)	05:42	18:56 (D05)	06:08	18:57 (D05)	06:39	07:09	06:44	07:17				
7	07:33	07:13	06:34	06:43	06:00	18:47 (D05)	05:37	18:49 (D05)	05:43	18:55 (D05)	06:09	18:57 (D05)	06:40	07:10	06:45	07:18				
8	07:32	07:11	07:32	06:41	05:59	19:38 (D05)	05:36	69	20:03 (D04)	20:42	72	20:10 (D04)	20:19	50	19:47 (D05)	19:33	18:43	16:59	16:40	
9	07:32	07:10	07:30	06:39	05:57	19:38 (D05)	05:37	68	20:03 (D04)	20:42	73	20:11 (D04)	20:17	48	19:46 (D05)	19:31	18:41	16:58	16:40	
10	07:32	07:09	07:29	06:38	05:56	19:39 (D05)	05:38	68	20:03 (D04)	20:42	73	20:12 (D04)	20:16	46	19:45 (D05)	19:30	18:39	16:57	16:40	
11	07:32	07:08	07:27	06:36	05:55	19:49 (D04)	20:38	66	20:03 (D04)	20:41	74	20:11 (D04)	20:15	45	19:44 (D05)	19:35	18:44	17:00	16:40	
12	07:32	07:07	07:26	06:35	05:54	19:50 (D04)	20:39	64	20:02 (D04)	20:41	76	20:12 (D04)	20:14	43	19:43 (D05)	19:26	18:36	16:55	16:40	
13	07:31	07:05	07:24	06:33	05:53	19:44 (D04)	05:36	63	20:02 (D04)	20:41	76	20:13 (D04)	20:12	41	19:42 (D05)	19:25	18:35	16:54	16:40	
14	07:31	07:04	07:22	06:32	05:52	19:45 (D04)	05:36	62	20:02 (D04)	20:40	78	20:13 (D04)	20:11	37	19:39 (D05)	19:23	18:33	16:53	16:40	
15	07:31	07:03	07:21	06:30	05:51	19:53 (D04)	20:40	61	20:02 (D04)	20:40	78	20:13 (D04)	20:10	34	19:37 (D05)	19:21	18:32	16:52	16:40	
16	07:30	07:02	07:19	06:28	05:50	19:54 (D04)	20:41	60	20:02 (D04)	20:39	79	20:14 (D04)	20:08	30	19:35 (D05)	19:20	18:30	16:51	16:41	
17	07:30	07:00	07:17	06:27	05:49	19:55 (D04)	20:41	60	20:02 (D04)	20:39	79	20:14 (D04)	20:07	26	19:33 (D05)	19:18	18:28	16:50	16:41	
18	07:29	06:59	07:16	06:25	05:48	19:56 (D04)	20:41	58	20:02 (D04)	20:37	78	20:13 (D04)	20:06	21	19:30 (D05)	19:16	18:27	16:49	16:41	
19	07:29	06:58	07:14	06:24	05:47	19:57 (D04)	20:42	58	20:02 (D04)	20:37	78	20:12 (D04)	20:04	11	19:25 (D05)	19:15	18:25	16:49	16:41	
20	07:28	06:56	07:12	06:22	05:47	19:57 (D04)	20:42	57	20:01 (D04)	20:37	77	20:12 (D04)	20:04	11	19:25 (D05)	19:15	18:25	16:49	16:41	
21	07:28	06:55	07:11	06:21	05:46	19:58 (D04)	20:42	56	20:01 (D04)	20:36	76	20:11 (D04)	20:01	11	19:24 (D05)	19:16	18:24	16:48	16:42	
22	07:27	06:53	07:09	06:20	05:45	19:59 (D04)	20:43	56	20:01 (D04)	20:35	76	20:11 (D04)	20:00	10	19:21 (D05)	19:16	18:21	16:46	16:43	
23	07:26	06:52	07:07	06:18	05:44	19:59 (D04)	20:43	56	20:00 (D04)	20:43	75	20:09 (D04)	19:58	9	19:20 (D05)	19:16	18:20	16:46	16:43	
24	07:26	06:50	07:06	06:17	05:43	19:58 (D04)	20:42	56	20:01 (D04)	20:34	75	20:09 (D04)	19:57	9	19:19 (D05)	19:16	18:18	16:45	16:43	
25	07:25	06:49	07:04	06:15	19:07 (D05)	05:43	55	20:02 (D04)	20:43	57	20:02 (D04)	20:33	74	20:08 (D04)	19:55	9	19:18 (D05)	19:16	18:44	16:44
26	07:24	06:48	07:02	06:14	19:02 (D05)	05:42	54	20:03 (D04)	20:43	58	20:04 (D04)	20:32	73	20:07 (D04)	19:54	8	19:03 (D05)	18:15	16:44	16:45
27	07:23	06:46	07:01	06:12	19:04 (D05)	05:41	53	20:03 (D04)	20:44	59	20:04 (D04)	20:31	73	20:07 (D04)	19:52	8	19:01 (D05)	18:14	16:43	16:45
28	07:22	06:45	06:59	06:11	19:05 (D05)	05:41	52	20:04 (D04)	20:44	60	20:04 (D04)	20:30	71	20:06 (D04)	19:51	7	19:00 (D05)	18:24	16:43	16:46
29	07:22	06:45	06:58	06:10	19:05 (D05)	05:40	51	20:05 (D04)	20:44	60	20:05 (D04)	20:29	70	20:05 (D04)	19:49	7	18:58 (D05)	18:11	16:42	16:46
30	07:21	06:46	06:56	06:08	19:03 (D05)	05:40	50	20:05 (D04)	20:44	61	20:05 (D04)	20:28	69	20:04 (D04)	19:48	6	18:56 (D05)	18:10	16:42	16:47
31	07:20	06:45	06:54	06:07	19:02 (D05)	05:39	49	20:04 (D04)	20:44	63	20:06 (D04)	20:27	68	20:03 (D04)	19:46	5	18:54 (D05)	18:09	16:42	16:48
32	07:20	06:44	06:53	06:06	19:01 (D05)	05:39	48	20:05 (D04)	20:44	63	20:06 (D04)	20:26	66	20:02 (D04)	19:44	4	18:52 (D05)	18:07	16:42	16:49
Potential sun hours	298	297	369	398	448	451	451	458	458	458	458	458	428	375	346	288				
Total, worst case					170	2030	1898	2260	762											
Sun reduction					0.82	0.92	0.94	0.97	0.96											
Oper. time red.					1.00	1.00	1.00	1.00	1.00											
Wind dir. red.					0.52	0.51	0.51	0.51	0.51											
Total reduction					0.43	0.47	0.48	0.49	0.50											
Total, real					73	959	913	1119	382											

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

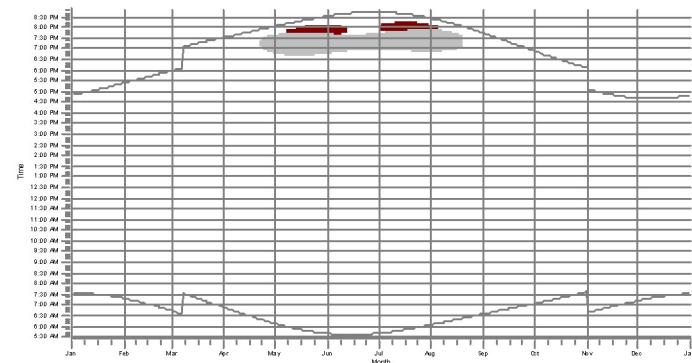
Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)

SHADOW - Calendar, graphical

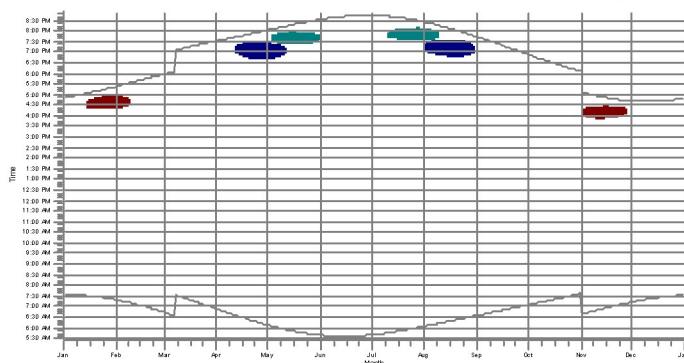
1: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (1)



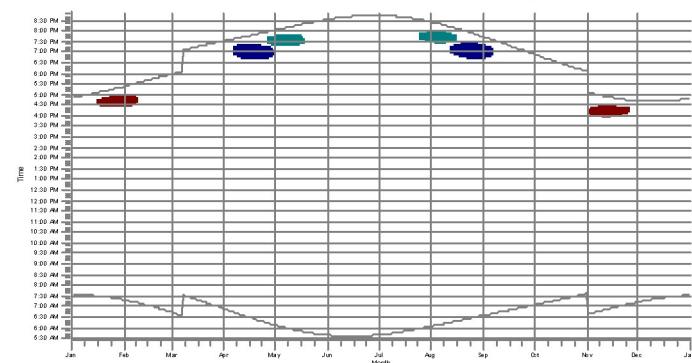
2: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2)



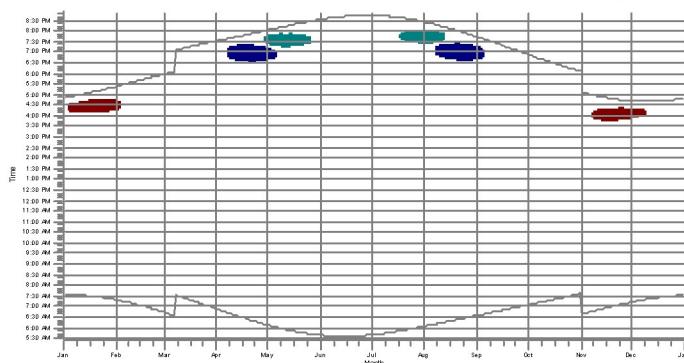
3: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (3)



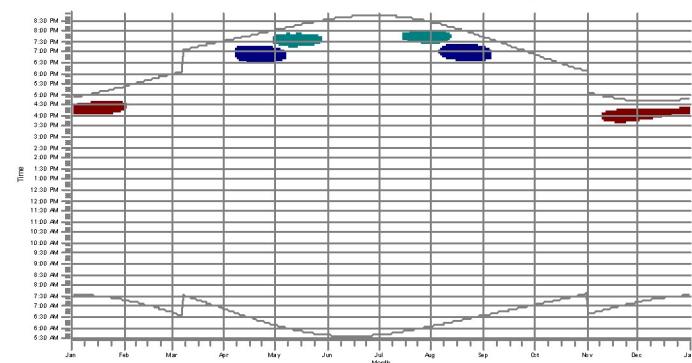
4: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (4)



5: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (5)



6: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (6)



WTGs

D02: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (6)
D03: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (7)

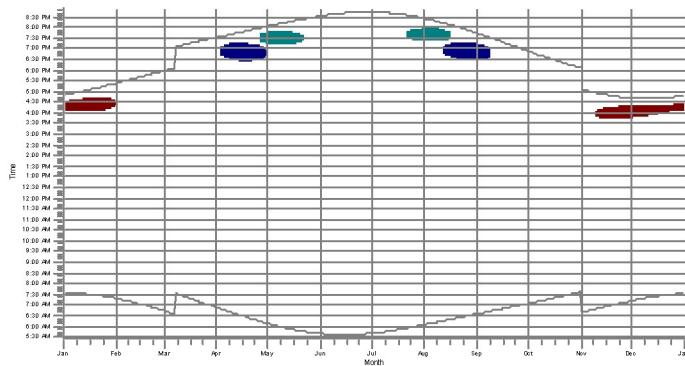
D04: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (8)
D05: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (12)

K04: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (24)
K05: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (25)

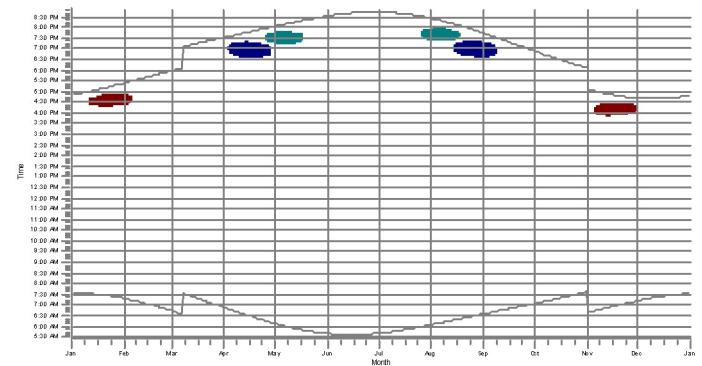
L04: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (33)

SHADOW - Calendar, graphical

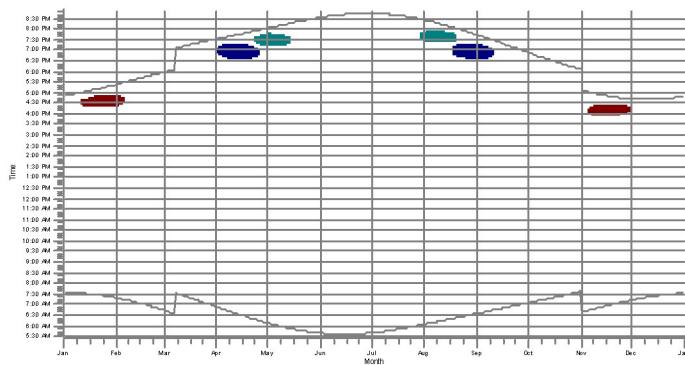
7: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (7)



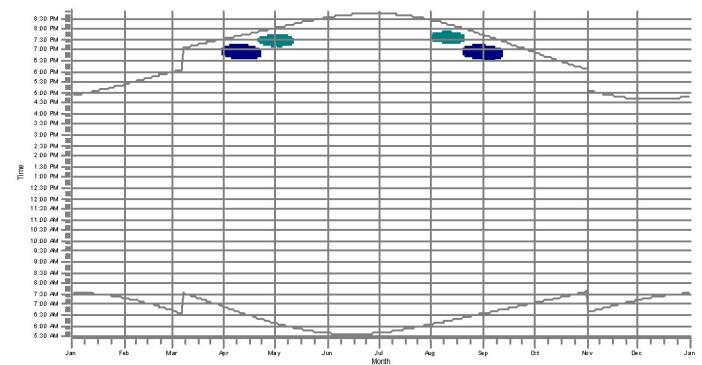
8: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (8)



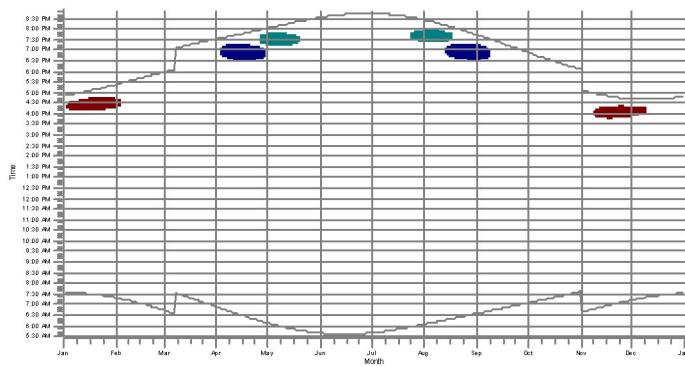
9: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (9)



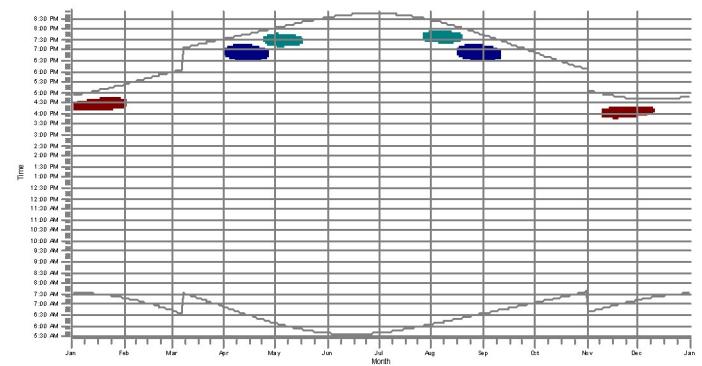
10: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (10)



11: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (11)



12: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (12)



WTGs

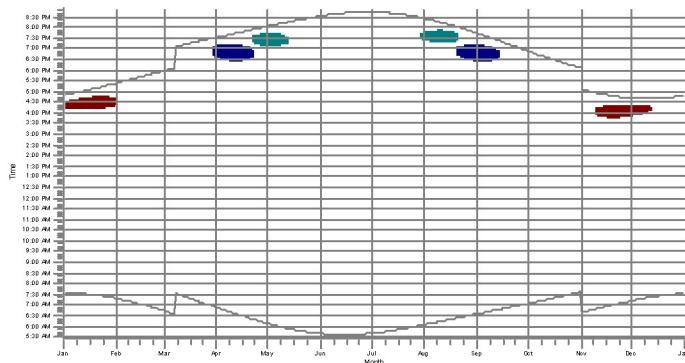
D02: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (6)

D03: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (7)

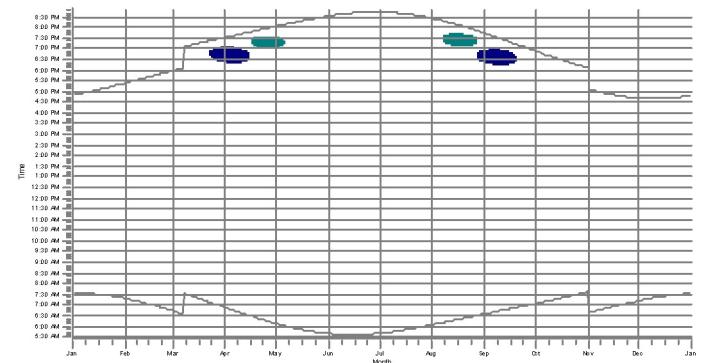
D04: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (8)

SHADOW - Calendar, graphical

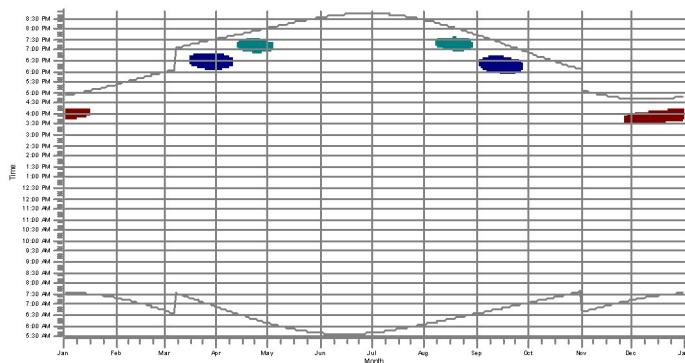
13: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (13)



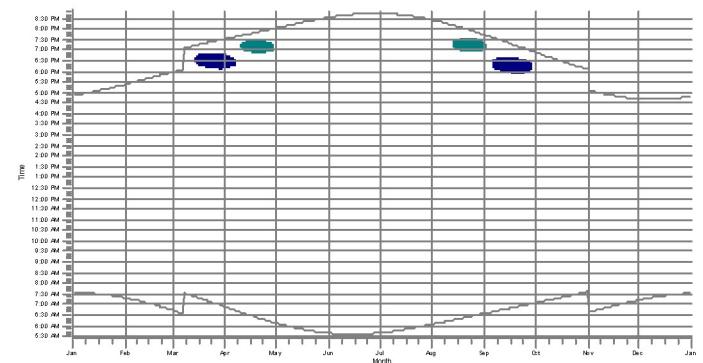
14: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (14)



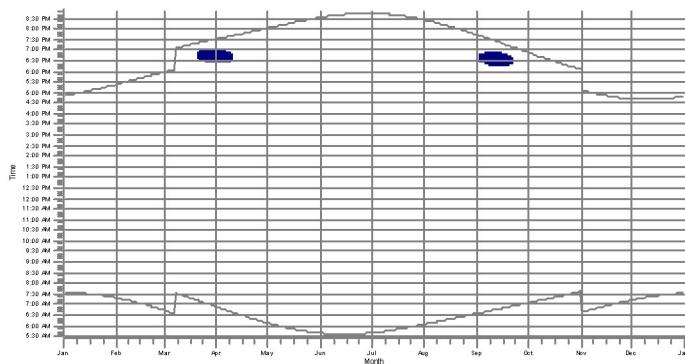
15: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (15)



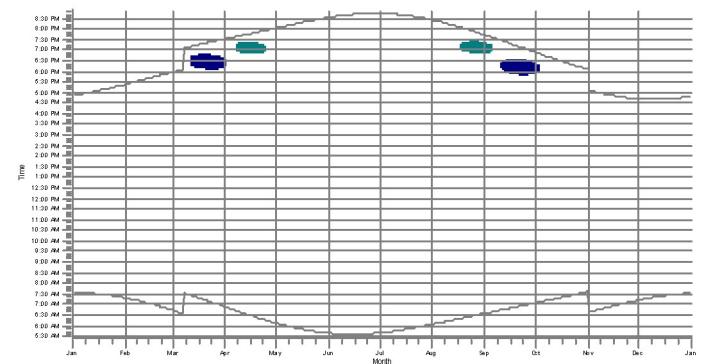
16: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (16)



17: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (17)



18: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (18)



WTGs

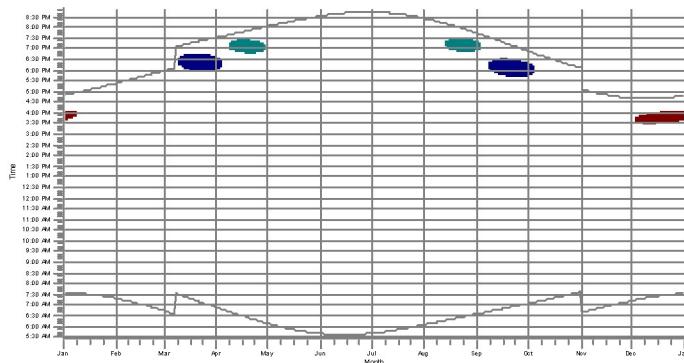
D02: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (6)

D03: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (7)

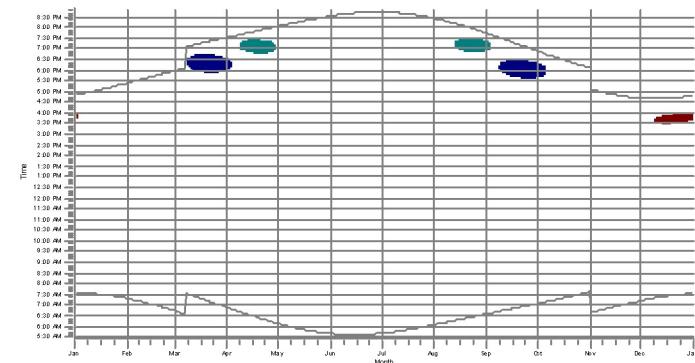
D04: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (8)

SHADOW - Calendar, graphical

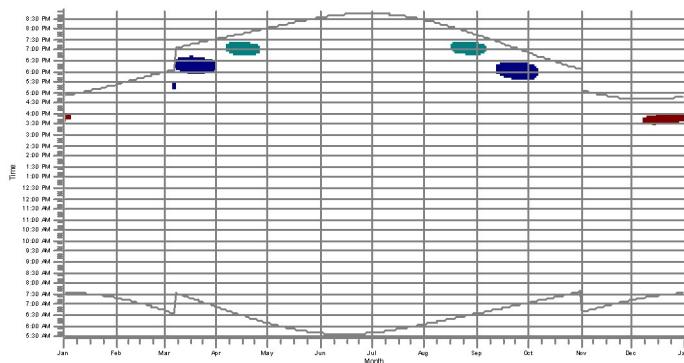
19: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (19)



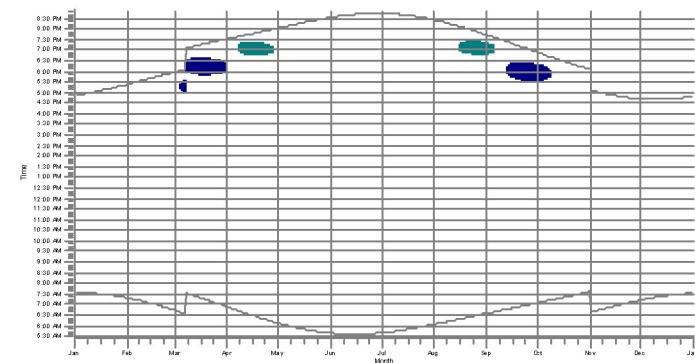
20: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (20)



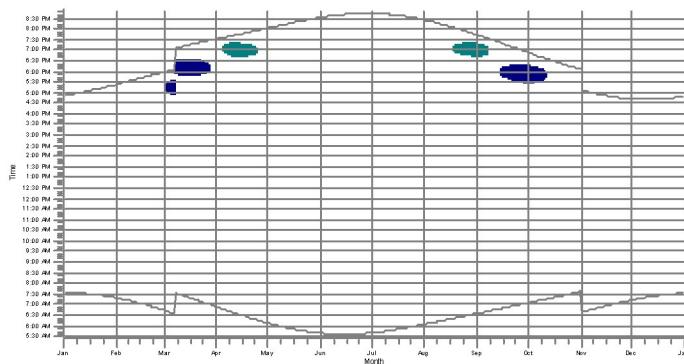
21: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (21)



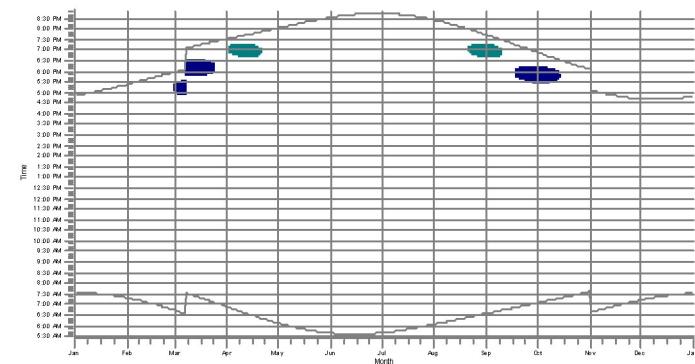
22: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (22)



23: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (23)



24: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (24)



WTGs

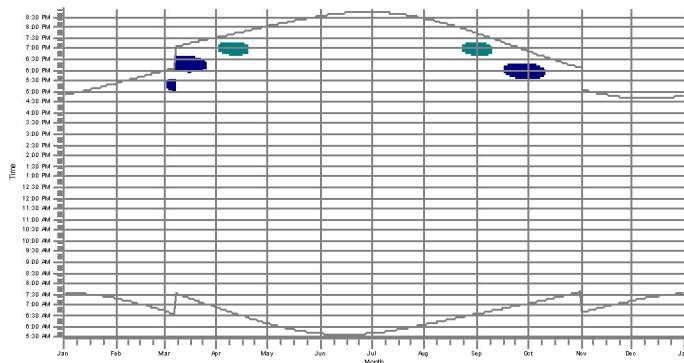
D02: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (6)

D03: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (7)

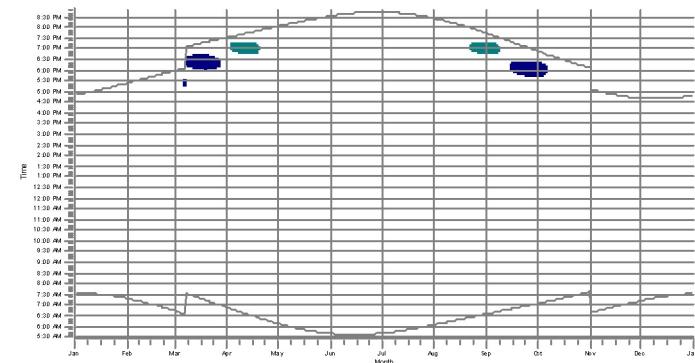
D04: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (8)

SHADOW - Calendar, graphical

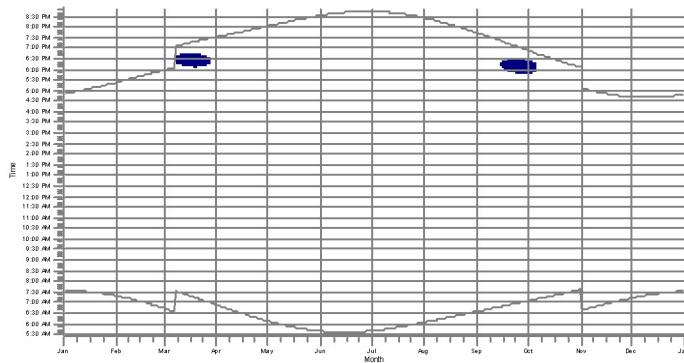
25: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (25)



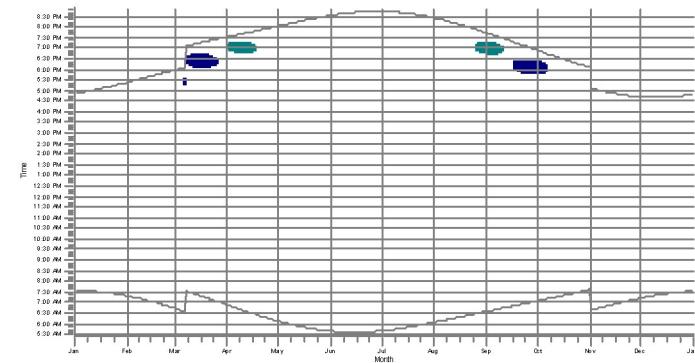
26: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (26)



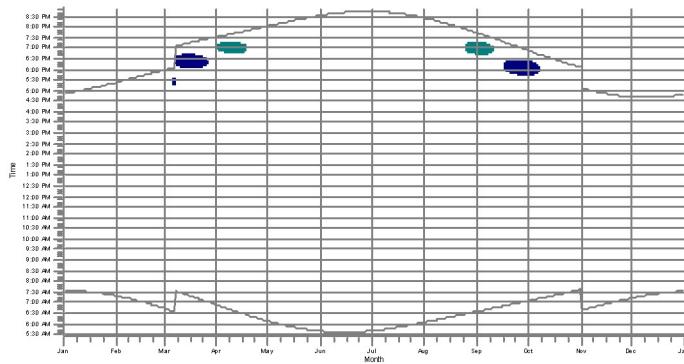
27: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (27)



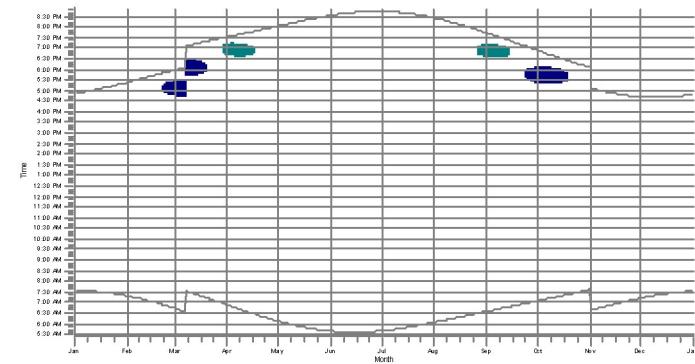
28: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (28)



29: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (29)



30: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (30)



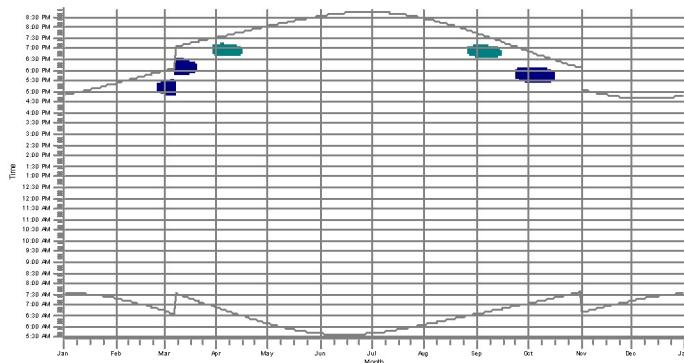
WTGs

D02: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (6)

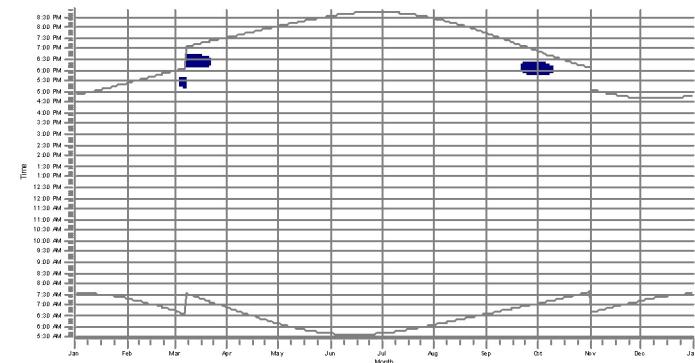
D03: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (7)

SHADOW - Calendar, graphical

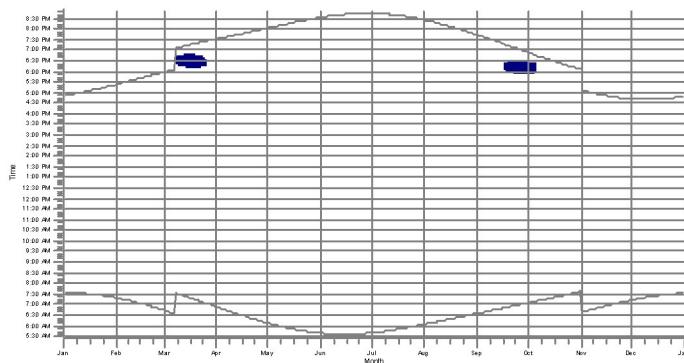
31: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (31)



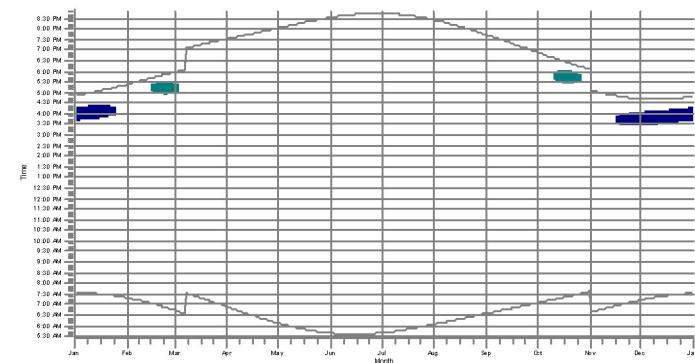
32: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (32)



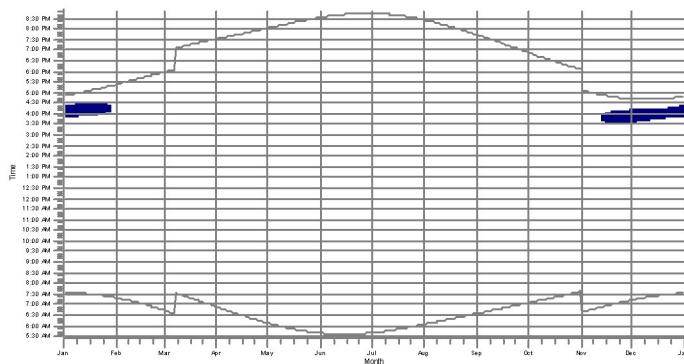
33: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (33)



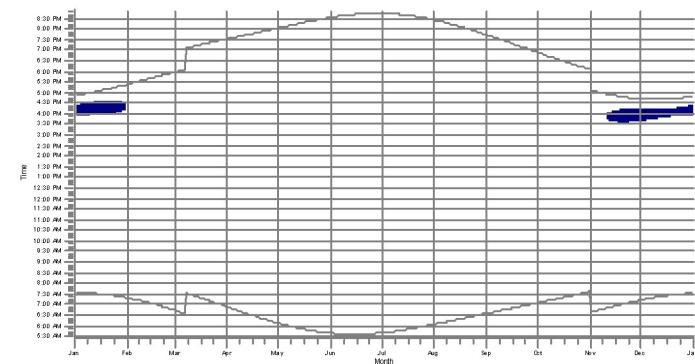
34: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (34)



35: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (35)



36: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (36)



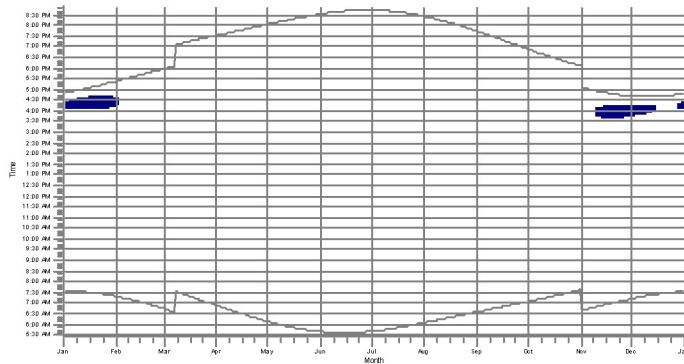
WTGs

D02: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (6)

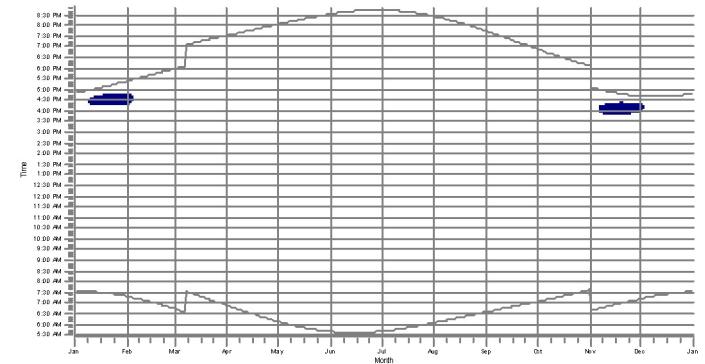
D03: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (7)

SHADOW - Calendar, graphical

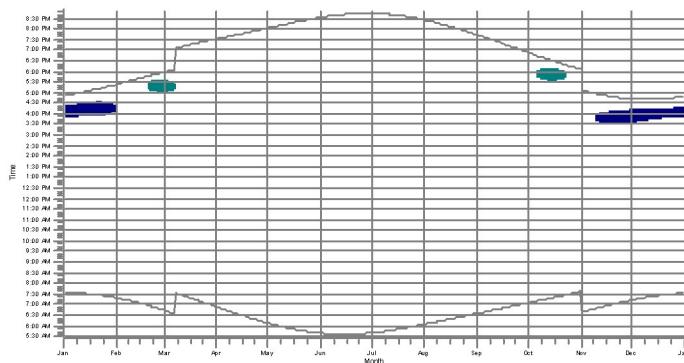
37: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (37)



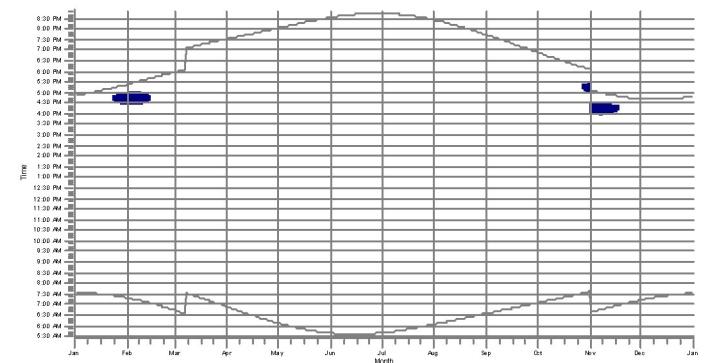
38: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (38)



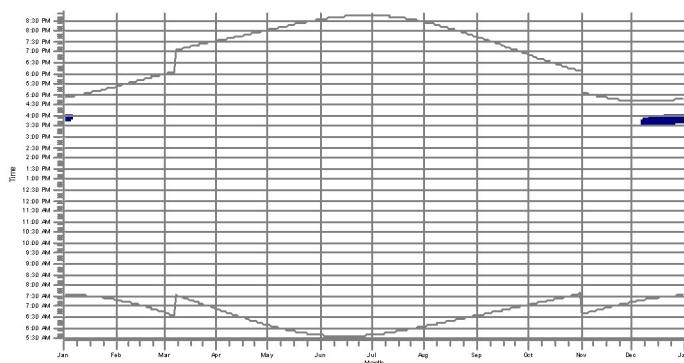
39: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (39)



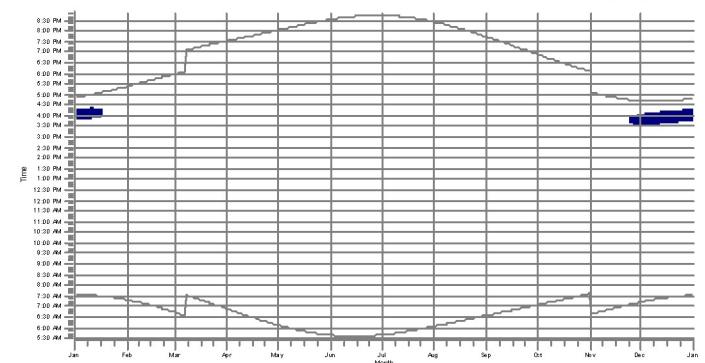
40: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (40)



41: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (41)



42: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (42)



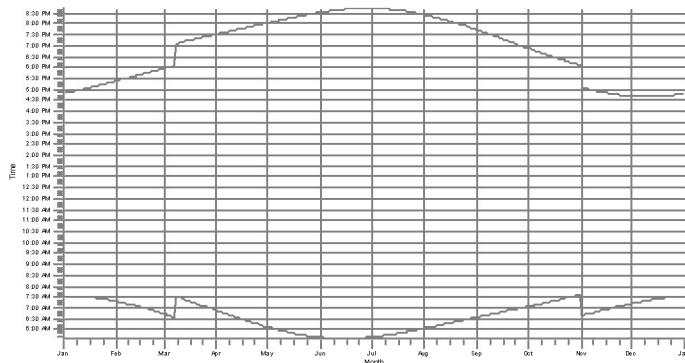
WTGs

D02: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (6)

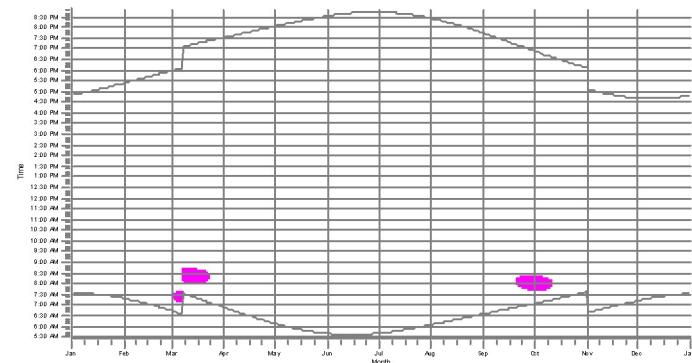
D03: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (7)

SHADOW - Calendar, graphical

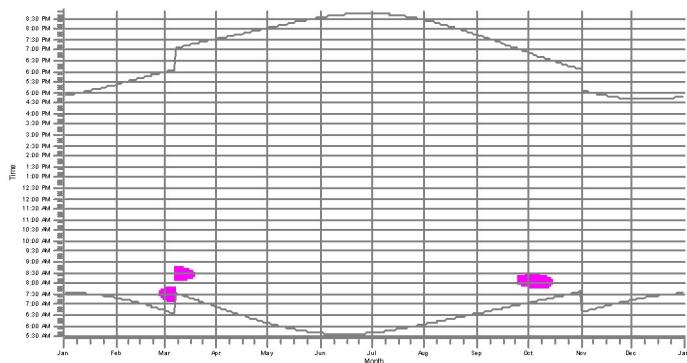
43: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (43)



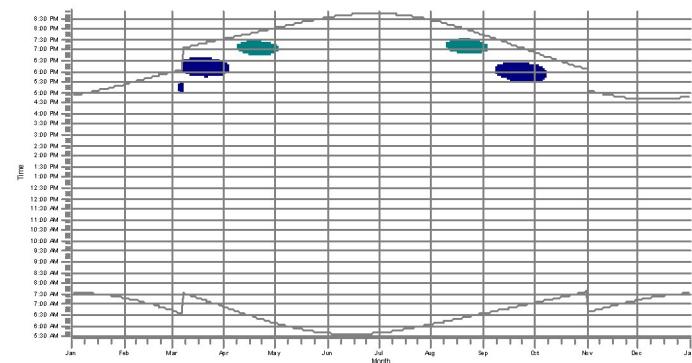
44: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (44)



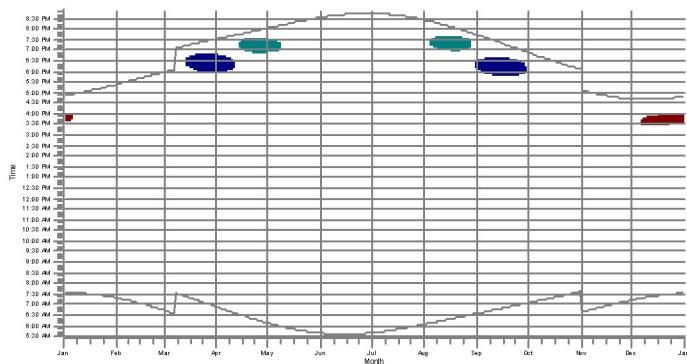
45: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (45)



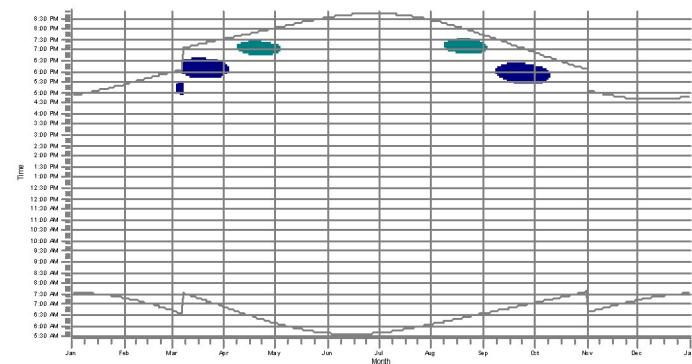
46: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (46)



47: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (47)



48: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (48)



WTGs

D01: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (5)

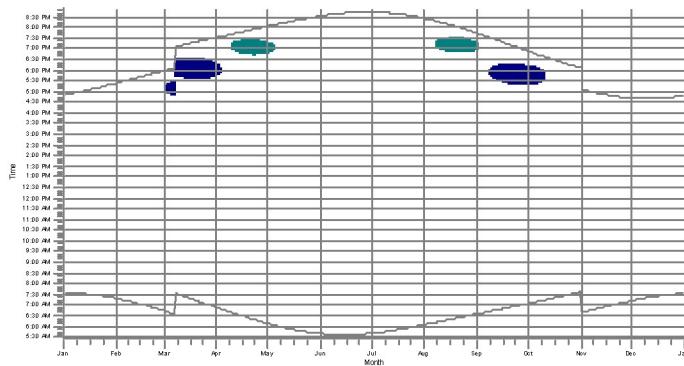
D02: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (6)

D03: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (7)

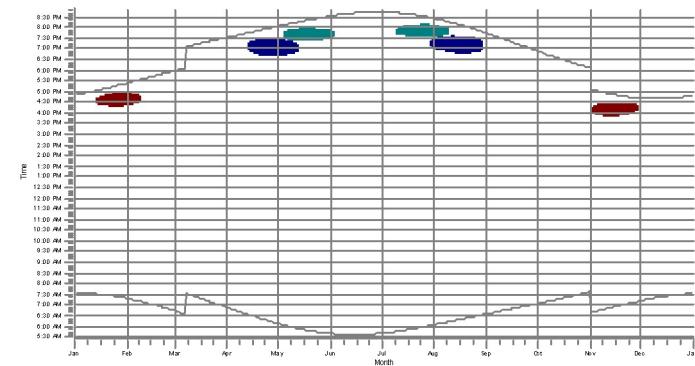
D04: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (8)

SHADOW - Calendar, graphical

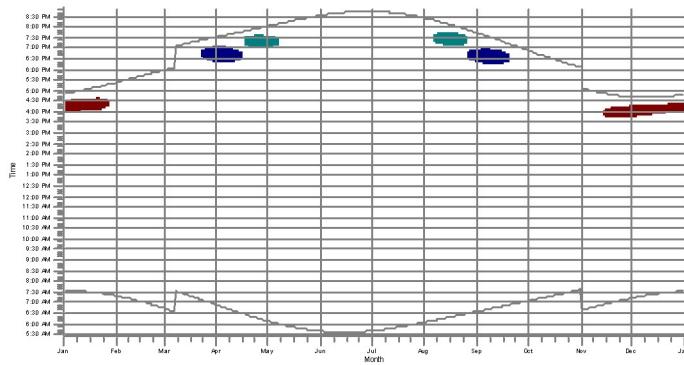
49: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (49)



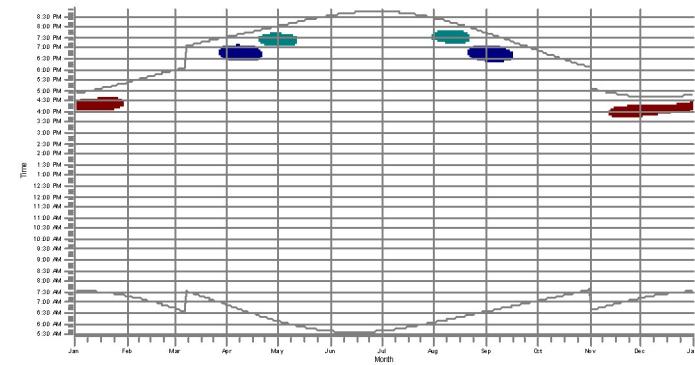
50: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (50)



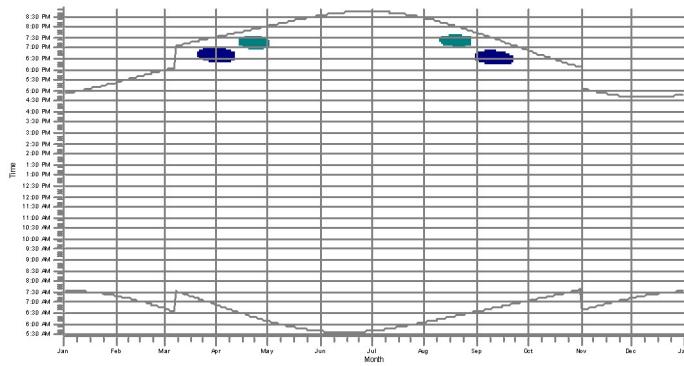
51: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (51)



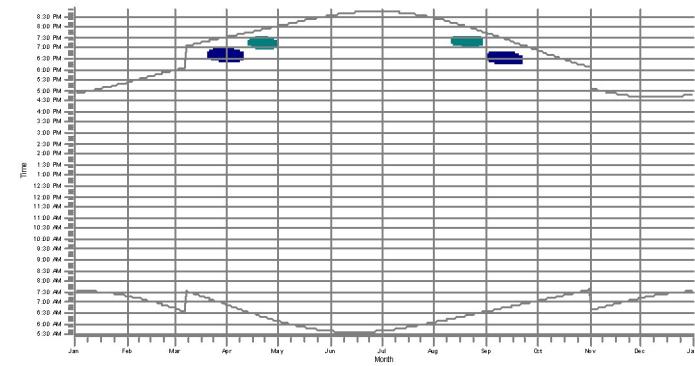
52: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (52)



53: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (53)



54: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (54)



WTGs

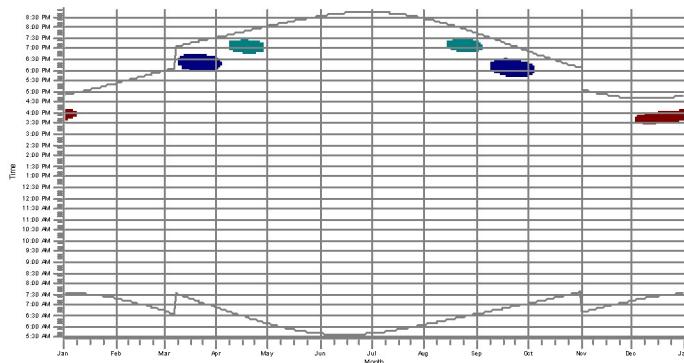
D02: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (6)

D03: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (7)

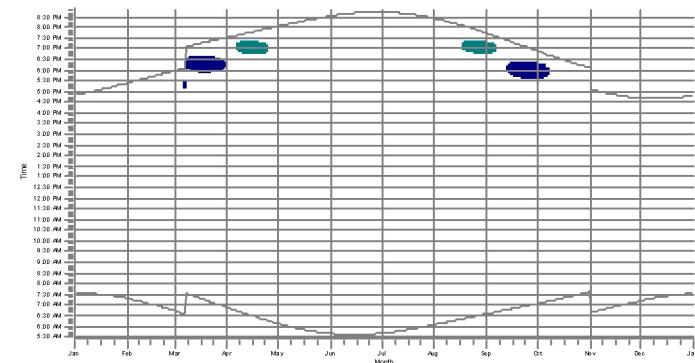
D04: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (8)

SHADOW - Calendar, graphical

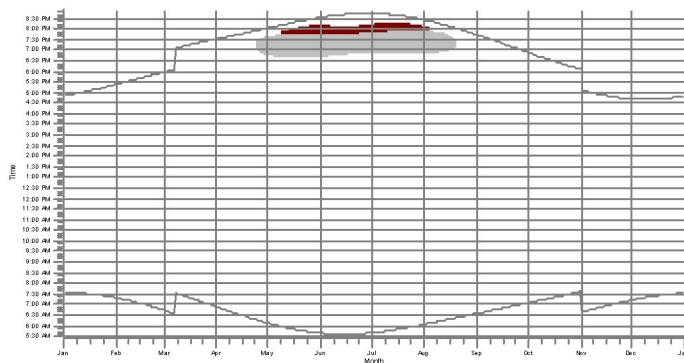
55: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (55)



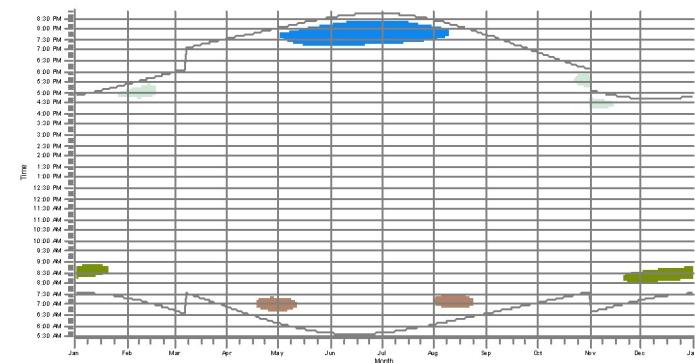
56: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (56)



57: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (57)



58: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (58)



WTGs

D02: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (6)
D03: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (7)

D04: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (8)
D05: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (12)

N02: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (61)
M02: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (62)

M10: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (64)
N05: VESTAS V162 5600 162.0 IOI hub: 125.0 m (TOT: 206.0 m) (67)

Attachment C

Phase II Analysis WindPRO Results

SHADOW - Main Result

Assumptions for shadow calculations

Maximum distance for influence	1,620 m
Minimum sun height over horizon for influence	3 °
Day step for calculation	1 days
Time step for calculation	1 minutes

Sunshine probability S/S0 (Sun hours/Possible sun hours) []											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.45	0.62	0.73	0.82	0.92	0.94	0.97	0.96	0.93	0.84	0.61	0.47

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW
23	65	319	1,935	1,830	119	5	24	340	1,432	1,766	761
W	WNW	NW	NNW	Sum							
99	19	10	13	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: 5m_contour.wpo (2)

Obstacles used in calculation

Eye height for map: 1.5 m

Grid resolution: 1.0 m

All coordinates are in

UTM (north)-NAD83 (US+CA) Zone: 10

WTGs

Easting	Northing	Z	Row data/Description	WTG type							
				Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM	
[m]											
A01-A	597,298	4,527,818	1,490.5 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
A02-A	597,698	4,527,462	1,505.7 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
A03	597,940	4,527,185	1,490.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
A04	598,170	4,526,938	1,500.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (1) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
A05	598,436	4,526,649	1,484.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (2) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
A06	598,713	4,526,330	1,457.7 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (3) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
A07	598,874	4,526,064	1,439.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (4) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
B01	601,380	4,523,596	1,279.7 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
B02	602,115	4,523,201	1,331.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
B03	602,563	4,522,545	1,353.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
B04	602,825	4,521,968	1,380.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
B05	602,986	4,521,188	1,420.5 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C02-A	599,187	4,523,128	1,328.8 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (9) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C03	599,717	4,522,840	1,375.4 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C04	600,145	4,522,493	1,399.2 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C05	600,368	4,522,142	1,388.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C06	600,734	4,521,827	1,440.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C07	600,889	4,521,501	1,448.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C08	601,394	4,520,765	1,527.4 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C09	601,894	4,519,662	1,405.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C10	602,361	4,519,469	1,403.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
C11	602,574	4,518,992	1,389.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
D01	595,139	4,524,387	1,139.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (5) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
D02	595,548	4,523,917	1,185.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (6) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
D03	595,970	4,523,584	1,191.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (7) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
D04	595,720	4,522,668	1,191.3 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (8) Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
D05	596,429	4,522,287	1,204.5 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
E01	595,840	4,521,016	1,265.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
E02-A	596,161	4,520,897	1,249.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
E03	596,489	4,520,822	1,285.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
E04	596,884	4,520,707	1,259.3 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
E05	597,316	4,520,684	1,243.8 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
F01	598,609	4,521,073	1,434.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
F02	598,714	4,520,467	1,415.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
F03	598,816	4,520,113	1,404.3 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		
F04	600,386	4,519,602	1,438.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0		

To be continued on next page...

SHADOW - Main Result

...continued from previous page

Easting	Northing	Z	Row data/Description	WTG type		Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM
				Valid	Manufact.				
[m]									
F05	600,550	4,519,255	1,414.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
F06	600,623	4,518,503	1,415.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
H01	598,277	4,518,937	1,379.8 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
H02	598,646	4,518,781	1,411.7 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
H03	599,087	4,518,444	1,441.2 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
J01	600,082	4,517,223	1,548.1 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
J02	600,796	4,517,003	1,573.4 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K01	596,706	4,519,081	1,307.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K02	597,220	4,518,436	1,358.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K03	597,480	4,518,150	1,380.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K04	597,755	4,517,908	1,383.4 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K05	597,969	4,517,594	1,374.1 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K06	598,725	4,517,606	1,467.9 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
K07	599,038	4,517,467	1,507.8 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
L04	597,640	4,516,709	1,461.3 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
L05	597,793	4,516,384	1,448.1 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
L06	598,317	4,516,327	1,446.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
L07	598,490	4,515,860	1,498.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
L08	599,054	4,515,525	1,579.5 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
L09	599,341	4,515,113	1,621.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
M05	595,155	4,516,474	1,310.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
M06	595,359	4,516,224	1,316.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
M07	595,799	4,515,977	1,343.6 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
M08	596,495	4,515,043	1,365.7 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
M09	597,621	4,515,192	1,422.1 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
M10	598,373	4,515,089	1,510.2 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
N01	595,154	4,515,307	1,343.5 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
N02	595,917	4,514,281	1,373.2 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
N03	596,808	4,514,027	1,393.0 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
N04	597,466	4,513,806	1,445.4 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0
N05	598,213	4,513,816	1,525.8 VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (... Yes	VESTAS	V162-5,600	5,600	162.0	125.0	0.0

Shadow receptor-Input

No.	Easting	Northing	Z	Width	Height	Elevation	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
	[m]	[m]	[m]	[m]	[m]	a.g.l.	[°]		[m]
1	596,761	4,517,643	1,313.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
2	597,139	4,522,095	1,193.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
3	596,965	4,523,417	1,160.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
5	596,936	4,523,472	1,156.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
6	596,892	4,523,480	1,154.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
7	596,927	4,523,510	1,153.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
11	596,977	4,523,500	1,155.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
12	596,994	4,523,518	1,154.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
15	596,914	4,523,677	1,141.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
46	596,765	4,523,743	1,146.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
47	596,801	4,523,680	1,147.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
48	596,728	4,523,747	1,148.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
49	596,687	4,523,749	1,149.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
50	596,950	4,523,415	1,160.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
51	597,031	4,523,606	1,146.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
52	596,991	4,523,563	1,150.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
57	597,086	4,522,102	1,193.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0

Calculation Results

Shadow receptor

Shadow, worst case

No.	Shadow hours per year	Shadow days per year	Max shadow hours per day	Shadow, expected values	
				Shadow hours per year	Shadow days per year
1	21:56	52	0:30	3:52	
2	102:56	119	1:14	50:11	

To be continued on next page...

SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case			Shadow, expected values	
	Shadow hours	Shadow days	Max shadow	Shadow hours	
	per year [h/year]	[days/year]	hours per day [h/day]	per year [h/year]	
3	46:46	99	0:42	23:17	
5	21:14	62	0:27	9:45	
6	0:00	0	0:00	0:00	
7	0:00	0	0:00	0:00	
11	0:00	0	0:00	0:00	
12	0:00	0	0:00	0:00	
15	0:00	0	0:00	0:00	
46	0:00	0	0:00	0:00	
47	7:52	30	0:19	3:17	
48	0:00	0	0:00	0:00	
49	0:00	0	0:00	0:00	
50	48:55	101	0:43	24:16	
51	0:00	0	0:00	0:00	
52	0:00	0	0:00	0:00	
57	0:00	0	0:00	0:00	

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

No.	Name	Worst case [h/year]	Expected [h/year]
A01-A	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (36)	0:00	0:00
A02-A	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (59)	0:00	0:00
A03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (60)	0:00	0:00
A04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (1)	0:00	0:00
A05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (2)	0:00	0:00
A06	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (3)	0:00	0:00
A07	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (4)	0:00	0:00
B01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (41)	0:00	0:00
B02	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (43)	0:00	0:00
B03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (44)	0:00	0:00
B04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (48)	0:00	0:00
B05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (50)	0:00	0:00
C02-A	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (9)	0:00	0:00
C03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (10)	0:00	0:00
C04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (42)	0:00	0:00
C05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (45)	0:00	0:00
C06	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (46)	0:00	0:00
C07	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (47)	0:00	0:00
C08	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (49)	0:00	0:00
C09	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (53)	0:00	0:00
C10	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (54)	0:00	0:00
C11	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (55)	0:00	0:00
D01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (5)	0:00	0:00
D02	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (6)	20:08	9:27
D03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (7)	30:17	15:34
D04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (8)	47:46	21:32
D05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (12)	84:39	41:52
E01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (11)	0:00	0:00
E02-A	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (13)	0:00	0:00
E03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (14)	0:00	0:00
E04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (15)	0:00	0:00
E05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (16)	0:00	0:00
F01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (17)	0:00	0:00
F02	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (18)	0:00	0:00
F03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (19)	0:00	0:00
F04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (51)	0:00	0:00
F05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (52)	0:00	0:00
F06	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (56)	0:00	0:00
H01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (21)	0:00	0:00
H02	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (26)	0:00	0:00
H03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (27)	0:00	0:00
J01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (57)	0:00	0:00
J02	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (58)	0:00	0:00
K01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (20)	0:00	0:00

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SHADOW - Main Result

...continued from previous page

No.	Name	Worst case [h/year]	Expected [h/year]
K02	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (22)	0:00	0:00
K03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (23)	0:00	0:00
K04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (24)	0:00	0:00
K05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (25)	0:00	0:00
K06	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (28)	0:00	0:00
K07	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (35)	0:00	0:00
L04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (33)	21:56	3:52
L05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (34)	0:00	0:00
L06	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (38)	0:00	0:00
L07	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (39)	0:00	0:00
L08	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (40)	0:00	0:00
L09	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (65)	0:00	0:00
M05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (29)	0:00	0:00
M06	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (30)	0:00	0:00
M07	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (31)	0:00	0:00
M08	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (62)	0:00	0:00
M09	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (37)	0:00	0:00
M10	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (64)	0:00	0:00
N01	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (32)	0:00	0:00
N02	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (61)	0:00	0:00
N03	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (63)	0:00	0:00
N04	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (66)	0:00	0:00
N05	VESTAS V162 5600 162.0 !O! hub: 125.0 m (TOT: 206.0 m) (67)	0:00	0:00

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.