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EXHIBIT
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Shadow Flicker Analysis

Prevailing Wind Park

Prevailing Wind Park, LLC

Prevailing Wind Park
Project No. 105644

Revision 6a
10/04/2018

BURNS McDONNELL

Shadow Flicker Analysis

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LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
Developer	Prevailing Wind Park, LLC
GE	General Electric
kg/m^3	Kilograms per cubic meter
m/s	Meters per second
MW	Megawatt
Project	Prevailing Wind Park
Project Site	Location of Prevailing Wind Park in South Dakota
Study	Shadow Flicker Analysis

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REVISION HISTORY

Rev	Issue Date	Release Notes
0	03-Apr-2018	Original release
1	09-Apr-2018	Revised wind turbine layout, incorporated client comments
2	11-Apr-2018	Added REC-138
3	16-Apr-2018	Revised wind turbine layout
4	27-Apr-2018	Revised wind turbine layout
5	25-May-2018	Included obstacles at select locations; added participant status to receptors
5a	27-May-2018	Revised Table 3-1, added Table 3-2
5b	28-May-2018	Incorporated client comments
5c	29-May-2018	Incorporated client comments
6	03-Oct-2018	Updated for new turbine layout; added receptor locations; GE3.8-137 layout
6a	04-Oct-2018	Incorporated client comments

1.0 INTRODUCTION

1.1 Study Overview

Burns & McDonnell Engineering Company, Inc. ("Burns & McDonnell") was retained by Prevailing Wind Park, LLC ("Developer") to conduct a shadow flicker analysis (the "Study") for the proposed Prevailing Wind Park (the "Project"). The objective of the Study was to estimate the annual frequency of shadow flicker on occupied residences caused by Project wind turbines. No attempt was made in this Study to examine or opine on health effects related to shadow flicker.

1.2 Project Overview

The proposed Prevailing Wind Park will be located in Bon Homme, Charles Mix, and Hutchinson Counties in South Dakota, approximately 10 miles east of the town of Wagner and approximately 75 miles southwest of the city of Sioux Falls, South Dakota (the "Project Site"). The Project will consist of up to 61 wind turbines with a maximum nameplate capacity of up to 219.6 megawatts ("MW"), although output at the point of interconnection will be limited to a maximum of 200 MW. The General Electric ("GE") 3.8-137 with a 111.5-meter hub height turbine model was considered as part of this Study.

A map showing the general location and configuration of the Project Site is included as Appendix A. For purposes of this Study, a total of 62 turbine positions were evaluated, although only up to 61 turbines are expected to be installed.

1.3 Shadow Flicker Overview

Shadow flicker occurs when wind turbine blades pass in front of the sun to create recurring shadows on an object. Such shadows occur only under very specific conditions, including sun position, wind direction, time of day, and other similar factors.

The intensity of shadow flicker varies significantly with distance, and as separation between a turbine and receptor increases, shadow flicker intensity correspondingly diminishes. Shadow flicker intensity for distances greater than 10 rotor diameters (i.e., 1370 meters) is generally low and considered imperceptible. At such distances, shadow flicker is typically only caused at sunrise or sunset, when cast shadows are sufficiently long.

Shadow flicker impacts are not currently regulated in applicable state or federal law, nor are there requirements in the current Charles Mix County (SD) or Hutchinson County (SD) ordinances. Section 1741 of the Bon Homme County (SD) zoning ordinance states the following:

When determined appropriate by the County, a Shadow Flicker Control System shall be installed upon all turbines which will cause a perceived shadow effect upon a habitable residential dwelling. Such system shall limit blade rotation at those times when shadow flicker exceeds thirty (30) minutes per day or thirty (30) hours per year at perceivable shadow flicker intensity as confirmed by the Zoning Administrator are probable.

In addition to providing the modeling results, this report identifies those receptors that may experience shadow flicker more than 30 hours per year and/or 30 minutes per day.

1.4 Site Visit

Burns & McDonnell visited the Project Site in September 2018 to visually confirm the location of occupied receptors for this Study. Beyond this visit, the contents of this evaluation are based exclusively upon desktop analysis by Burns & McDonnell.

2.0 MODELING PARAMETERS AND INPUTS

2.1 Modeling Overview

Shadow flicker was modeled at the Project Site using WindPRO, an industry-leading software package for the design and planning of wind energy projects. This package models the sun's path with respect to every turbine location during every minute over a complete year. Any shadow flicker caused by each turbine is then aggregated for each receptor for the entire year.

The following sections are summaries of the inputs utilized in the WindPRO model for this Study.

2.2 Turbine Coordinates

Shadow flicker intensity is partially dependent upon the distance from a receptor to the turbine causing the shadow. The Developer-provided coordinates of each turbine are presented in Appendix B, and the location of each turbine is presented graphically in Appendix A. For purposes of this Study, a total of 62 turbine positions were evaluated, although only up to 61 turbines are expected to be installed.

2.3 Turbine Dimensions

The size of a wind turbine, including both hub height and rotor diameter, contributes to the length and width of the shadows that may be cast by that turbine. The GE 3.8-137 wind turbine generators were each modeled with a rotor diameter of 137 meters and a hub height of 111.5 meters.

2.4 Receptors

A quantity of 149 receptors were modeled at the Project Site, including two (2) cemeteries. The coordinates of each receptor are presented in Appendix B and the location of each receptor is presented graphically in Appendix A. Coordinates for each receptor were provided by Developer, although Burns & McDonnell visited the Project Site in September 2018 to visually confirm the location of occupied receptors for this Study.

Each receptor was modeled in "green house" mode within the WindPRO model. This approach provides a conservative estimate of the amount of time when shadow flicker could occur by modeling each receptor as having windows on all sides and effectively causing the home to be susceptible to flicker effects in all directions.

2.5 Terrain

The WindPRO model utilizes topography data to place turbines and receptors at the proper elevations. This information is also used by the model to consider any natural land features between a turbine and a receptor that may block shadows from being seen at a receptor.

Publicly-available terrain data was downloaded from the National Elevation Dataset, a product of the United States Geological Survey. The 10-meter resolution digital elevation model DEM was exported at 10-foot intervals for use in the WindPRO model. Elevations were assigned by Burns & McDonnell to each turbine and each receptor using this data.

2.6 Obstacles

Obstacles located between a receptor and a turbine, such as trees or buildings, may significantly reduce or eliminate the duration and/or intensity of shadow flicker. Burns & McDonnell included obstacles in the WindPRO model, including trees and outbuildings, for only those receptors that exceeded 30 hours per year and/or 30 minutes per day. Such receptors are indicated by an asterisk (*) in Appendix B and Appendix F, respectively. No obstacles were considered or modeled for any other receptors.

WindPRO models obstacles utilizing a cubic volume, where each obstacle is assigned a height, width, depth, and porosity level. The obstacles near the applicable receptors were reviewed by Burns & McDonnell and the type and characteristics of each obstacle were visually estimated using publicly-available desktop aerial imagery. Trees and groups of trees were assumed to be 12 meters tall, barns and other outbuildings were assumed to be 4 meters tall, and grain bins were assumed to be 6 meters tall. Only obstacles in reasonably close proximity to a receptor were considered (i.e., those that might be expected to influence flicker durations).

Burns & McDonnell did not make any in-person verifications regarding the existence, size, or influence of obstacles. The obstacles were modeled exclusively through desktop analysis of aerial imagery.

2.7 Turbine Operation

Shadow flicker is contingent upon the movement of the turbine blades. Shadow flicker can only occur when the turbine is in operation (i.e., when the turbine blades are rotating). Moreover, shadow flicker is generally most notable when a turbine is facing a receptor, as this results in the widest-possible shadow being cast. To more accurately reflect the periods of operation of each Project wind turbine, on-site hub-height wind data was provided by Developer and used to indicate the periods when the turbines are inactive due to wind speeds below the turbine cut-in speed or above the turbine cut-out speed, at which time the turbine rotor is not in motion and no shadow flicker will occur.

Project Site-specific wind data was also utilized to model the actual orientation of the turbines relative to each receptor. The Developer-provided wind data includes data collected by an on-site meteorological mast between September 2013 and September 2018. The provided data is shown in Appendix C.

Power curves for the proposed turbines were provided by Developer. These power curves were added to the WindPRO model to more accurately reflect the turbine's operational characteristics. The Developer-provided power curves are shown in Appendix E.

2.8 Flicker Relevance

At distances beyond 10 rotor diameters, shadow flicker effects are generally considered low, as shadows diffuse and become imperceptible. Thus, a distance equal to 10 times the rotor diameter of each turbine (i.e., 1370 meters) was modeled as the maximum distance at which shadow flicker was considered relevant; receptors greater than this distance from a given turbine were not evaluated. The proximity of this buffer relative to each receptor is presented graphically in Appendix A.

2.9 Sun Angle

The sun's path with respect to each turbine location is calculated by the WindPRO model to determine the cast shadow paths during every minute over a complete year. However, at very low sun angles, the light must pass through more atmosphere and becomes too diffused to form a coherent shadow. Thus, a value of three (3) degrees was utilized for the height at which the sun would not cause noticeable flicker.

2.10 Sun Obstruction

The percentage of the turbine blade covering the sun disc is calculated by the WindPRO model to determine the size of shadow cast during every minute over a complete year. By default, the WindPRO model calculates shadow flicker only when at least 20 percent of the sun disc is covered by the turbine blades. When less than 20 percent of the sun disc is masked by the blades, the shadow will be too diffuse to cause a coherent shadow.

2.11 Environment

Shadow flicker is only caused when the sun is shining. Sunshine probability data (see Appendix D) was obtained by Burns & McDonnell from www.city-data.com. This data represents the percentage of hours each month that the sun is expected to be shining during daylight hours, with consideration given for cloud cover, rainy days, fog, or other similar occurrences that may diminish the potential occurrence or severity of shadow flicker.

3.0 RESULTS

Using the inputs and parameters defined in Section 2.0, the WindPRO model was used to calculate shadow flicker for the receptors at the Project Site. Table 3-1 presents a summary of these results by landowner status for the applicable receptor. Detailed tables are included within Appendix F that present shadow flicker durations by receptor, including estimated hours per year and maximum minutes per day. Additionally, maps are provided in Appendix G which illustrate the shadow flicker vectors (in hours per year) caused by each Project turbine.

Table 3-1: Summary of Results

Landowner Status	No. of Turbines	No. of Receptors	No. of Receptors, Flicker ≥ 30 hr/yr	No. of Receptors, Flicker ≥ 30 min/day
Participating	62	48	2	13
Non-participating		101	1	14

The following is a set of key observations from the results of the Study:

- With the current layout, 3 of the 149 known receptors exceed 30 hours per year of shadow flicker. Additionally, 25 of the 149 known receptors exceed 30 minutes per day of shadow flicker, although approximately one quarter (7 of 25) exceed this daily threshold by only 5 or fewer minutes and more than half (13 of 25) exceed this daily threshold by only 10 or fewer minutes. Refer to Appendix F for a complete listing of results.
- The majority of observed shadow flicker on each receptor occurs during early morning and/or late afternoon and evening hours (see Appendix H).
- For purposes of this Study, a total of 62 turbine positions were evaluated, although Burns & McDonnell understands that only up to 61 turbines are expected to be installed. Depending on the turbine location(s) that are eliminated, flicker durations at impacted receptors are likely to decrease from those presented herein.
- The Study was performed using a conservative modeling approach with Project Site-specific conditions. For example, the Study modeled each receptor as a “green house”, meaning each receptor was modeled as having windows on all sides and effectively causing the home to be susceptible to flicker effects in all directions. Further, the majority of the receptor locations were modeled as if no obstacles were present, including trees or buildings, which may significantly reduce or eliminate the duration and/or intensity of shadow flicker at a receptor. Due to the conservative approach of the Study, the actual duration and intensity of shadow flicker experienced at each receptor is expected to be less than those reported in the Study.

- Notwithstanding any shadow flicker which may occur at the Project Site, mitigation techniques may be utilized to reduce these effects. Common techniques include planting vegetation, awning installation, and/or reduced turbine operation.

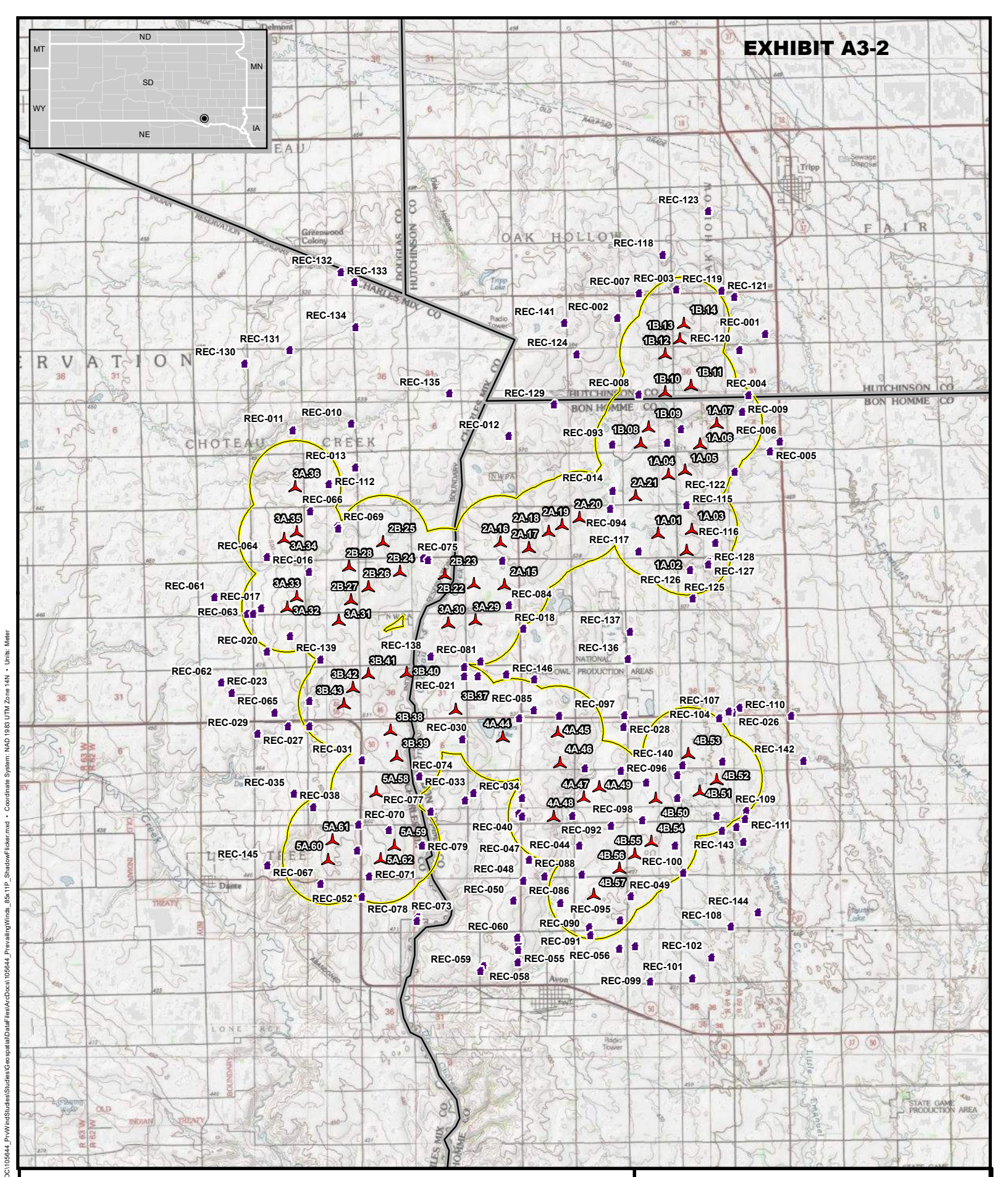
The following is an overview of the shadow flicker characteristics at receptors where obstacles were considered but impacts were not fully mitigated:

- REC-008 is receiving shadow flicker from 1B.10 to the east. While there are a few buildings in the vicinity, the area to the east is largely exposed to this source. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-009 is receiving shadow flicker from 1A.07 to the southwest. The area to the west-southwest is generally exposed, with insufficient geometry to fully mitigate shadow flicker. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-014 is receiving shadow flicker from 2A.21 to the southeast. While obstacles exist to the east of the receptor it is largely exposed to shadow flicker to the southeast. A reduction in flicker duration of approximately 6 hours/year was observed when considering obstacles at this receptor.
- REC-015 is receiving shadow flicker from 2A.21 to the southeast. This receptor is largely exposed to shadow flicker to the east and southeast. A reduction in flicker duration of approximately 7 hours/year was observed when considering obstacles at this receptor.
- REC-017 is receiving shadow flicker from 3A.32 to the east and 3A.33 to the northeast. Some trees and buildings reduce shadow impact, but the greatest exposure to shadow flicker is from the east where the receptor is partially exposed. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-024 is receiving shadow flicker from 3B.43 to the east. The receptor is largely exposed to the south and partially to the southeast. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-031 receiving shadow flicker from 3B.39 to the east. The receptor is largely exposed to the east. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-032 is receiving shadow flicker from 4B.50 to the southeast. Some buildings to the south reduce flicker, however the receptor is largely exposed to the south. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.

- REC-040 is receiving shadow flicker from 4A.48 to the east. Some obstacles are in line of flicker impact, but the area to the east-southeast is largely exposed. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-041 is receiving shadow flicker from 4A.48 to the west. While several obstacles are within close proximity to this receptor, there is direct exposure to the west. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-042 is receiving shadow flicker from 4B.50 to the southwest, from 4B.51 to the southeast, and from 4B.52 to the east-southeast. This receptor has several obstacles nearby to the north but is largely exposed to the east, west, and south. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-045 is receiving shadow flicker from 4B.54 to the west. While several obstacles are in the vicinity, the geometry of the obstacles is insufficient to fully reduce flicker impact. A reduction in flicker duration of approximately 3.5 hours/year was observed when considering obstacles at this receptor.
- REC-046 is receiving shadow flicker from 5A.60 and 5A.61 to the west and from 5A.59 and 5A.62 to the east. Several obstacles are in the vicinity; however, the receptor is largely exposed to the south and east. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-051 is receiving shadow flicker from 4B.57 to the northeast. This receptor is largely exposed to the east. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-070 is receiving shadow flicker form 5A.61 to the southwest. While some obstacles are in the vicinity, the geometry is insufficient to fully reduce flicker impacts to the west and southwest. A reduction in flicker duration of approximately 5.5 hours/year and 24 minutes/day was observed when considering obstacles at this receptor.
- REC-075 is receiving shadow flicker from 2B.23 to the southeast. While there are several obstacles in the vicinity, the receptor is exposed to the southeast. A reduction in flicker duration of approximately 23 hours/year and 22 minutes/day was observed when considering obstacles at this receptor.
- REC-076 is receiving shadow flicker from 2B.23 to the southeast and 2B.24 to the southwest and is largely exposed to the east and south, with some exposure to the west. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.

- REC-082 is receiving shadow from 2B.22 to the southwest. This receptor has several obstacles in the vicinity but is partially exposed to the southwest. A reduction in flicker duration of approximately 13 hours/year and 6 minutes/day when considering obstacles at this receptor.
- REC-089 is receiving shadow flicker from 4A.46 to the northwest and 4A.49 to the southeast. While there are several obstacles in the vicinity, the geometry is insufficient to fully mitigate shadow flicker impacts. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-093 is receiving shadow flicker from 1B.08 to the east and 1B.09 to the northeast. This receptor is largely exposed to the east and south. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-094 is receiving shadow flicker from 2A.20 to the southwest and 2A.21 to the northeast. This receptor has some obstacles in the vicinity, but there remains sparse coverage to the east, south, and southeast. A reduction in flicker duration of approximately 6 hours/year was observed when considering obstacles at this receptor.
- REC-096 is receiving shadow flicker from 4B.50 to the southeast and 4A.49 to the southwest. Several obstacles are in the vicinity, but there remains exposure to the east and southeast. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-112 is receiving shadow flicker from 3A.36 to the east where there are some obstacles present; however, the geometry is insufficient to fully mitigate shadow flicker impact. Thus, no reduction in flicker duration was observed when considering obstacles at this receptor.
- REC-113 is receiving shadow flicker from 1B.08 to the east. This receptor is exposed to the east and south. A reduction in flicker duration of approximately 11 hours/year and 33 minutes /day was observed when considering obstacles at this receptor.
- REC 114 is receiving shadow flicker from 1B.08 to the southwest, 1A.06 to the southeast, and 1B.09 to the east and is exposed to the east, with some exposure to the west and partial exposure to the south. A reduction in flicker duration of approximately 8 hours/year and 10 minutes/day was observed when considering obstacles at this receptor.

APPENDIX A - PROJECT SITE LAYOUT



Path: \\bmcdcfs\Clients\BTS\SPowerDC\105644_PrvWindStudies\Studies\GeospatialData\FilesArcDocs\105644_PrevailingWinds_85x11P_ShadowFlicker.mxd • Coordinate System: NAD 1983 UTM Zone 14N • Units: Meter

APPENDIX B - INFRASTRUCTURE COORDINATES

Table B-1: Turbine Coordinates

Turbine Number	Easting [m]	Northing [m]
1A.01	579,956	4,775,946
1A.02	580,807	4,775,443
1A.03	580,970	4,776,074
1A.04	580,259	4,777,725
1A.05	580,759	4,777,855
1A.06	581,221	4,778,640
1A.07	581,719	4,779,255
1B.08	579,428	4,778,668
1B.09	579,671	4,779,153
1B.10	580,170	4,780,211
1B.11	580,939	4,780,407
1B.12	580,170	4,781,359
1B.13	580,604	4,781,811
1B.14	580,727	4,782,275
2A.15	575,324	4,774,400
2A.16	575,201	4,775,693
2A.17	576,064	4,775,521
2A.18	576,650	4,776,014
2A.19	577,060	4,776,210
2A.20	577,580	4,776,426
2A.21	579,275	4,777,079
2B.22	574,404	4,774,437
2B.23	573,519	4,774,711
2B.24	572,179	4,774,804
2B.25	571,662	4,775,700
2B.26	571,219	4,774,346
2B.27	570,700	4,773,949
2B.28	570,639	4,774,959
3A.29	574,452	4,773,338
3A.30	573,634	4,773,249
3A.31	570,336	4,773,327
3A.32	568,781	4,773,724
3A.33	569,071	4,774,045
3A.34	568,691	4,775,793
3A.35	569,074	4,775,995

Turbine Number	Easting [m]	Northing [m]
3A.36	569,026	4,777,349
3B.37	573,856	4,770,651
3B.38	571,896	4,770,015
3B.39	572,076	4,769,232
3B.40	572,380	4,771,753
3B.41	571,220	4,771,721
3B.42	570,763	4,771,308
3B.43	570,487	4,770,821
4A.44	575,275	4,769,819
4A.45	576,925	4,769,963
4A.46	576,997	4,769,043
4A.47	577,718	4,768,001
4A.48	576,805	4,767,428
4A.49	578,173	4,768,318
4B.50	579,886	4,767,974
4B.51	581,200	4,768,190
4B.52	581,716	4,768,536
4B.53	580,860	4,769,311
4B.54	579,755	4,766,668
4B.55	579,255	4,766,296
4B.56	578,787	4,765,862
4B.57	578,011	4,765,079
5A.58	571,464	4,768,160
5A.59	572,004	4,766,553
5A.60	570,006	4,766,129
5A.61	570,143	4,766,716
5A.62	571,597	4,766,151

Notes:
[1] All coordinates presented in UTM NAD83 Zone 14N (meters)
[2] All coordinates provided by Developer in "PWIND - 62x GE38137 111p5m v180925-02" on 20180925

Table B-2: Receptor Coordinates

Receptor Name	Easting [m]	Northing [m]	County Name	Participating Status
REC-001	583,179	4,781,949	Hutchinson	Non-participating
REC-002	578,731	4,782,429	Hutchinson	Participating
REC-003	580,507	4,783,274	Hutchinson	Non-participating
REC-004	582,679	4,780,105	Hutchinson	Non-participating
REC-005	583,327	4,778,397	Bon Homme	Non-participating
REC-006	583,615	4,778,695	Bon Homme	Non-participating
REC-007	579,386	4,783,172	Hutchinson	Non-participating
REC-008*	579,365	4,780,123	Hutchinson	Non-participating
REC-009*	582,486	4,779,597	Bon Homme	Non-participating
REC-010	570,706	4,779,233	Charles Mix	Non-participating
REC-011	568,955	4,779,050	Charles Mix	Non-participating
REC-012	575,451	4,778,870	Bon Homme	Non-participating
REC-013	570,834	4,777,924	Charles Mix	Non-participating
REC-014*	578,568	4,777,265	Bon Homme	Non-participating
REC-015*	578,579	4,777,228	Bon Homme	Non-participating
REC-016	569,438	4,774,776	Charles Mix	Participating
REC-017*	568,000	4,773,684	Charles Mix	Non-participating
REC-018	575,894	4,773,069	Bon Homme	Participating
REC-019	568,870	4,772,838	Charles Mix	Participating
REC-020	568,171	4,772,373	Charles Mix	Non-participating
REC-021	574,123	4,771,642	Bon Homme	Participating
REC-022	574,118	4,771,913	Bon Homme	Non-participating
REC-023	567,115	4,771,132	Charles Mix	Non-participating
REC-024*	569,456	4,770,886	Charles Mix	Non-participating
REC-025	582,410	4,770,691	Bon Homme	Participating
REC-026	582,206	4,770,538	Bon Homme	Non-participating
REC-027	569,451	4,770,123	Charles Mix	Non-participating
REC-028	578,916	4,770,107	Bon Homme	Participating
REC-029	567,890	4,769,897	Charles Mix	Non-participating
REC-030	574,058	4,769,738	Bon Homme	Non-participating
REC-031*	571,038	4,769,100	Charles Mix	Non-participating
REC-032*	579,595	4,768,434	Bon Homme	Participating
REC-033	574,388	4,768,112	Bon Homme	Non-participating
REC-034*	575,857	4,767,969	Bon Homme	Non-participating
REC-035	568,988	4,768,088	Charles Mix	Non-participating

Receptor Name	Easting [m]	Northing [m]	County Name	Participating Status
REC-036	574,140	4,767,903	Bon Homme	Non-participating
REC-037*	580,535	4,767,956	Bon Homme	Participating
REC-038	569,571	4,767,694	Charles Mix	Non-participating
REC-039*	575,754	4,767,512	Bon Homme	Non-participating
REC-040*	575,854	4,767,409	Bon Homme	Non-participating
REC-041*	577,366	4,767,429	Bon Homme	Participating
REC-042*	580,535	4,768,650	Bon Homme	Non-participating
REC-043	582,314	4,767,105	Bon Homme	Non-participating
REC-044	577,582	4,766,535	Bon Homme	Participating
REC-045*	580,460	4,766,528	Bon Homme	Participating
REC-046*	570,892	4,766,384	Charles Mix	Participating
REC-047	576,072	4,766,099	Bon Homme	Non-participating
REC-048	575,888	4,765,484	Bon Homme	Non-participating
REC-049	579,136	4,765,004	Bon Homme	Non-participating
REC-050	575,594	4,764,878	Bon Homme	Participating
REC-051*	577,015	4,764,806	Bon Homme	Participating
REC-052	571,035	4,764,976	Charles Mix	Non-participating
REC-053	575,752	4,763,554	Bon Homme	Non-participating
REC-054	579,261	4,763,509	Bon Homme	Non-participating
REC-055	575,738	4,763,383	Bon Homme	Non-participating
REC-056	578,784	4,763,423	Bon Homme	Non-participating
REC-057	575,729	4,763,021	Bon Homme	Non-participating
REC-058	574,690	4,762,906	Bon Homme	Non-participating
REC-059	574,609	4,762,765	Bon Homme	Non-participating
REC-060	575,719	4,763,759	Bon Homme	Non-participating
REC-061	566,590	4,774,005	Charles Mix	Non-participating
REC-062	566,795	4,771,446	Charles Mix	Non-participating
REC-063	567,576	4,773,523	Charles Mix	Non-participating
REC-064	568,170	4,775,222	Charles Mix	Non-participating
REC-065	568,402	4,770,548	Charles Mix	Non-participating
REC-066	569,475	4,776,605	Charles Mix	Participating
REC-067	569,782	4,765,374	Charles Mix	Non-participating
REC-068	570,301	4,776,152	Charles Mix	Non-participating
REC-069	570,321	4,776,086	Charles Mix	Non-participating
REC-070*	570,931	4,767,169	Charles Mix	Non-participating
REC-071	571,247	4,765,598	Charles Mix	Non-participating

Receptor Name	Easting [m]	Northing [m]	County Name	Participating Status
REC-072	571,848	4,767,001	Charles Mix	Participating
REC-073	572,712	4,764,371	Charles Mix	Non-participating
REC-074	572,760	4,768,610	Bon Homme	Non-participating
REC-075*	572,875	4,775,184	Charles Mix	Participating
REC-076*	573,024	4,775,138	Charles Mix	Non-participating
REC-077	573,104	4,767,559	Bon Homme	Non-participating
REC-078	572,690	4,764,270	Charles Mix	Non-participating
REC-079*	572,840	4,766,532	Charles Mix	Participating
REC-080	574,527	4,771,635	Bon Homme	Participating
REC-081	574,606	4,772,084	Bon Homme	Participating
REC-082*	575,265	4,775,117	Bon Homme	Participating
REC-083	575,384	4,771,696	Bon Homme	Participating
REC-084	575,460	4,773,772	Bon Homme	Participating
REC-085*	576,210	4,770,611	Bon Homme	Participating
REC-086	576,538	4,765,598	Bon Homme	Participating
REC-087	576,971	4,770,447	Bon Homme	Participating
REC-088	577,660	4,765,661	Bon Homme	Participating
REC-089*	577,747	4,768,860	Bon Homme	Participating
REC-090	577,878	4,764,079	Bon Homme	Non-participating
REC-091	577,916	4,763,844	Bon Homme	Non-participating
REC-092	578,532	4,767,119	Bon Homme	Participating
REC-093*	578,576	4,778,619	Bon Homme	Participating
REC-094*	578,515	4,776,677	Bon Homme	Participating
REC-095	578,804	4,764,275	Bon Homme	Non-participating
REC-096*	578,828	4,768,793	Bon Homme	Non-participating
REC-097	578,943	4,770,455	Bon Homme	Non-participating
REC-098	579,475	4,767,289	Bon Homme	Non-participating
REC-099	579,721	4,762,442	Bon Homme	Participating
REC-100	580,720	4,765,706	Bon Homme	Non-participating
REC-101	580,992	4,762,541	Bon Homme	Non-participating
REC-102	581,560	4,763,175	Bon Homme	Non-participating
REC-103	581,721	4,767,420	Bon Homme	Participating
REC-104	581,794	4,770,381	Bon Homme	Non-participating
REC-105*	581,891	4,769,063	Bon Homme	Non-participating
REC-106	581,883	4,766,985	Bon Homme	Participating
REC-107	582,090	4,770,568	Bon Homme	Non-participating

Receptor Name	Easting [m]	Northing [m]	County Name	Participating Status
REC-108	582,148	4,764,102	Bon Homme	Participating
REC-109	582,610	4,767,583	Bon Homme	Non-participating
REC-110	583,963	4,770,430	Bon Homme	Non-participating
REC-111	582,578	4,767,332	Bon Homme	Non-participating
REC-112*	570,034	4,777,429	Charles Mix	Non-participating
REC-113*	580,226	4,778,670	Bon Homme	Participating
REC-114*	580,644	4,779,066	Bon Homme	Participating
REC-115	580,813	4,776,798	Bon Homme	Participating
REC-116*	581,676	4,775,654	Bon Homme	Participating
REC-117	579,368	4,775,404	Bon Homme	Participating
REC-118	580,095	4,784,337	Hutchinson	Non-participating
REC-119	581,868	4,783,246	Hutchinson	Non-participating
REC-120	582,411	4,781,467	Hutchinson	Non-participating
REC-121	582,256	4,783,055	Hutchinson	Non-participating
REC-122	582,261	4,777,793	Bon Homme	Participating
REC-123	581,461	4,785,646	Hutchinson	Non-participating
REC-124	577,505	4,781,336	Hutchinson	Non-participating
REC-125	580,996	4,773,976	Bon Homme	Non-participating
REC-126	580,916	4,774,830	Bon Homme	Participating
REC-127*	581,474	4,775,076	Bon Homme	Participating
REC-128	581,468	4,774,997	Bon Homme	Participating
REC-129	576,816	4,779,814	Bon Homme	Non-participating
REC-130	567,502	4,781,060	Charles Mix	Non-participating
REC-131	568,850	4,781,446	Charles Mix	Non-participating
REC-132	570,408	4,783,811	Charles Mix	Non-participating
REC-133	570,806	4,783,497	Charles Mix	Non-participating
REC-134	570,845	4,782,153	Charles Mix	Non-participating
REC-135	573,665	4,780,153	Charles Mix	Non-participating
REC-136	579,049	4,772,150	Bon Homme	Non-participating
REC-137	579,104	4,772,978	Bon Homme	Non-participating
REC-138*	573,105	4,772,224	Bon Homme	Participating
REC-139	569,781	4,772,134	Charles Mix	Non-participating
REC-140	580,689	4,768,952	Bon Homme	Non-participating
REC-141	577,130	4,782,270	Hutchinson	Non-participating
REC-142	584,340	4,769,093	Bon Homme	Non-participating
REC-143	582,522	4,766,643	Bon Homme	Non-participating

Receptor Name	Easting [m]	Northing [m]	County Name	Participating Status
REC-144	582,964	4,764,514	Bon Homme	Non-participating
REC-145	568,186	4,765,929	Charles Mix	Non-participating
REC-146	576,221	4,771,527	Bon Homme	Participating
REC-147	575,778	4,770,361	Bon Homme	Participating
REC-148	568,806	4,770,128	Charles Mix	Non-participating
REC-149	567,763	4,773,526	Charles Mix	Non-participating

Notes:
[1] All coordinates presented in UTM NAD83 Zone 14N (meters)
[2] Coordinates provided by Developer in "RECEPTORS-OCCUPIED.KMZ" and through field investigation data provided 20180920
[3] Participating status provided by Developer in "Prevailing Winds - Homes on Leased Land" dated 20180516
[4] * Indicates receptor that was analyzed with obstacles.

APPENDIX C - ON-SITE FREQUENCY DISTRIBUTION

Table C-1: Onsite Frequency Distribution, 111.5 magl

Bin	Wind Direction [degrees]											
[m/s]	0	30	60	90	120	150	180	210	240	270	300	330
0	11.63	9.15	7.94	7.92	7.53	7.80	8.96	5.46	5.14	5.35	10.68	12.43
1	11.51	9.25	11.54	9.35	8.16	4.89	3.58	8.52	9.42	9.91	10.83	10.20
2	20.70	20.13	20.43	17.93	15.71	12.23	10.56	15.50	18.48	21.81	17.68	17.72
3	33.22	34.35	34.95	33.11	29.54	23.68	20.09	29.61	31.54	34.00	27.44	29.54
4	52.15	56.03	57.94	55.29	52.65	35.96	28.99	46.16	45.04	55.74	46.51	48.70
5	72.48	70.20	75.20	70.95	67.65	50.49	38.48	52.72	57.06	64.37	57.02	66.18
6	81.89	83.87	81.78	85.27	89.90	69.52	50.15	62.29	68.49	78.41	65.81	71.98
7	96.59	95.00	98.95	97.99	102.77	81.21	57.90	72.27	81.10	84.11	76.67	81.19
8	102.03	89.37	95.39	101.36	101.50	88.94	76.50	77.23	90.82	89.96	84.70	86.32
9	104.00	95.04	105.73	95.63	101.91	103.82	97.70	99.43	98.02	93.31	87.28	87.37
10	91.57	103.26	106.21	98.09	107.43	111.11	107.15	107.33	109.89	102.07	92.31	92.86
11	90.03	91.21	95.97	96.93	95.27	114.82	130.43	109.07	110.93	99.29	95.28	86.57
12	72.68	71.41	72.31	78.47	80.22	97.90	124.26	102.86	90.53	86.11	87.42	81.99
13	55.36	56.78	53.37	59.24	59.95	78.28	104.76	87.84	71.31	62.37	69.16	65.63
14	40.54	40.48	33.32	40.20	39.37	55.87	69.60	59.70	50.90	49.04	54.02	47.97
15	26.30	27.72	22.60	26.65	21.13	36.25	35.80	31.98	30.57	26.73	37.69	36.57
16	19.06	18.47	13.08	15.28	9.32	19.23	22.26	18.43	15.66	18.46	25.87	26.87
17	11.91	12.71	6.83	7.28	6.69	7.58	10.69	7.61	7.57	10.26	20.54	20.48
18	7.90	10.59	5.39	4.48	4.71	4.06	6.00	3.14	4.30	6.27	14.83	13.39
19	4.72	6.88	3.08	2.84	3.40	1.52	3.19	2.30	3.12	2.14	8.86	10.20
20	2.26	4.50	2.50	1.45	1.01	0.64	0.68	1.54	1.78	2.07	6.90	6.91
21	1.57	1.50	1.73	1.40	0.96	0.54	0.30	0.56	1.11	1.50	4.82	4.08
22	0.62	0.63	0.58	0.53	0.25	0.20	0.13	0.70	0.82	1.07	3.11	3.07
23	0.46	0.25	0.48	0.05	0.30	0.15	0.21	0.63	0.97	0.71	2.22	1.69
24	0.26	0.04	0.29	0.19	0.15	0.20	0.04	0.63	0.15	0.14	1.47	0.98
25	0.16	0.04	0.14	0.05	0.05	0.15	0.26	0.77	0.15	0.00	1.04	0.74
26	0.00	0.13	0.14	0.00	0.00	0.10	0.21	0.28	0.07	0.07	0.39	0.40
27	0.03	0.13	0.10	0.00	0.00	0.29	0.04	0.21	0.00	0.07	0.14	0.25
28	0.00	0.04	0.00	0.00	0.00	0.29	0.04	0.28	0.00	0.00	0.04	0.09
29	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.14	0.00	0.00	0.00	0.06
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.15	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sum	**1012**	**1009**	**1008**	**1008**	**1008**	**1008**	**1009**	**1005**	**1005**	**1005**	**1011**	**1012**

Notes:
[1] All data provided by Developer via "Prevailing Winds Site Average.windog"
[2] All data presented in milles for period from September 20, 2013 to September 13, 2018
[3] All data presented at 111.5 magl

APPENDIX D - SUNSHINE PROBABILITY DATA

Figure D-1: Monthly Sunshine Probability for Wagner, South Dakota

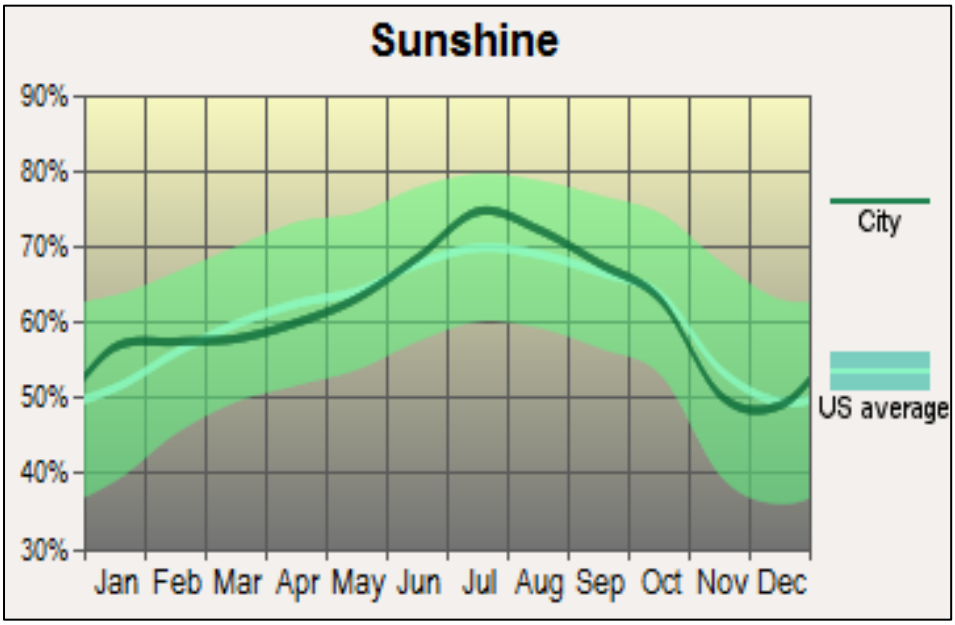


Table D-1: Monthly Sunshine Probability for Wagner, South Dakota

Month	Avg Sunshine Probability
January	58%
February	58%
March	59%
April	60%
May	63%
June	69%
July	74%
August	72%
September	68%
October	65%
November	50%
December	50%

Notes:
[1] Data source: http://www.city-data.com/city/Wagner-South-Dakota.html
[2] Data location: Wagner, South Dakota
[3] Data in Table D-1 estimated from source data in Figure D-1

APPENDIX E - POWER CURVE

Table E-1: GE 3.8-137 Power Curve Values

Wind Speed [m/s]	Power [kW]
0.0	0
1.0	0
2.0	0
3.0	14
4.0	179
5.0	434
6.0	786
7.0	1269
8.0	1906
9.0	2648
10.0	3284
11.0	3776
12.0	3830
13.0	3830
14.0	3830
15.0	3830
16.0	3830
17.0	3830
18.0	3830
19.0	3830
20.0	3830
21.0	3830
22.0	3830
23.0	3830
24.0	3830
25.0	3830

Notes:
[1] Power curve for air density of 1.16 kg/m3 and site-specific TI band
[2] All data provided by Developer via "Site Specific Power Curve - PCD_1206271_PrevailingWind_3.8-137_EN_r01"

APPENDIX F - FLICKER RESULTS BY RECEPTOR

Table F-1: Flicker Duration by Receptor

Receptor Name	Easting [m]	Northing [m]	County Name	Participating Status	Flicker Duration [hour/year]	Flicker Duration [max min/day]
REC-001	583,179	4,781,949	Hutchinson	Non-participating	0.00	0
REC-002	578,731	4,782,429	Hutchinson	Participating	0.00	0
REC-003	580,507	4,783,274	Hutchinson	Non-participating	0.00	0
REC-004	582,679	4,780,105	Hutchinson	Non-participating	5.67	27
REC-005	583,327	4,778,397	Bon Homme	Non-participating	0.00	0
REC-006	583,615	4,778,695	Bon Homme	Non-participating	0.00	0
REC-007	579,386	4,783,172	Hutchinson	Non-participating	0.00	0
REC-008*	579,365	4,780,123	Hutchinson	Non-participating	11.02	39
REC-009*	582,486	4,779,597	Bon Homme	Non-participating	9.22	38
REC-010	570,706	4,779,233	Charles Mix	Non-participating	0.00	0
REC-011	568,955	4,779,050	Charles Mix	Non-participating	0.00	0
REC-012	575,451	4,778,870	Bon Homme	Non-participating	0.00	0
REC-013	570,834	4,777,924	Charles Mix	Non-participating	0.00	0
REC-014*	578,568	4,777,265	Bon Homme	Non-participating	12.22	43
REC-015*	578,579	4,777,228	Bon Homme	Non-participating	12.83	44
REC-016	569,438	4,774,776	Charles Mix	Participating	4.80	27
REC-017*	568,000	4,773,684	Charles Mix	Non-participating	19.87	40
REC-018	575,894	4,773,069	Bon Homme	Participating	0.00	0
REC-019	568,870	4,772,838	Charles Mix	Participating	0.00	0
REC-020	568,171	4,772,373	Charles Mix	Non-participating	0.00	0
REC-021	574,123	4,771,642	Bon Homme	Participating	0.00	0
REC-022	574,118	4,771,913	Bon Homme	Non-participating	0.00	0
REC-023	567,115	4,771,132	Charles Mix	Non-participating	0.00	0
REC-024*	569,456	4,770,886	Charles Mix	Non-participating	6.20	31
REC-025	582,410	4,770,691	Bon Homme	Participating	0.00	0
REC-026	582,206	4,770,538	Bon Homme	Non-participating	0.00	0
REC-027	569,451	4,770,123	Charles Mix	Non-participating	0.00	0
REC-028	578,916	4,770,107	Bon Homme	Participating	0.00	0
REC-029	567,890	4,769,897	Charles Mix	Non-participating	0.00	0
REC-030	574,058	4,769,738	Bon Homme	Non-participating	3.57	25
REC-031*	571,038	4,769,100	Charles Mix	Non-participating	6.43	31
REC-032*	579,595	4,768,434	Bon Homme	Participating	9.67	45
REC-033	574,388	4,768,112	Bon Homme	Non-participating	0.00	0
REC-034*	575,857	4,767,969	Bon Homme	Non-participating	0.00	0
REC-035	568,988	4,768,088	Charles Mix	Non-participating	0.00	0
REC-036	574,140	4,767,903	Bon Homme	Non-participating	0.00	0
REC-037*	580,535	4,767,956	Bon Homme	Participating	0.00	0
REC-038	569,571	4,767,694	Charles Mix	Non-participating	0.00	0
REC-039*	575,754	4,767,512	Bon Homme	Non-participating	0.00	0
REC-040*	575,854	4,767,409	Bon Homme	Non-participating	7.42	34
REC-041*	577,366	4,767,429	Bon Homme	Participating	22.70	55
REC-042*	580,535	4,768,650	Bon Homme	Non-participating	28.00	53
REC-043	582,314	4,767,105	Bon Homme	Non-participating	0.00	0
REC-044	577,582	4,766,535	Bon Homme	Participating	0.00	0

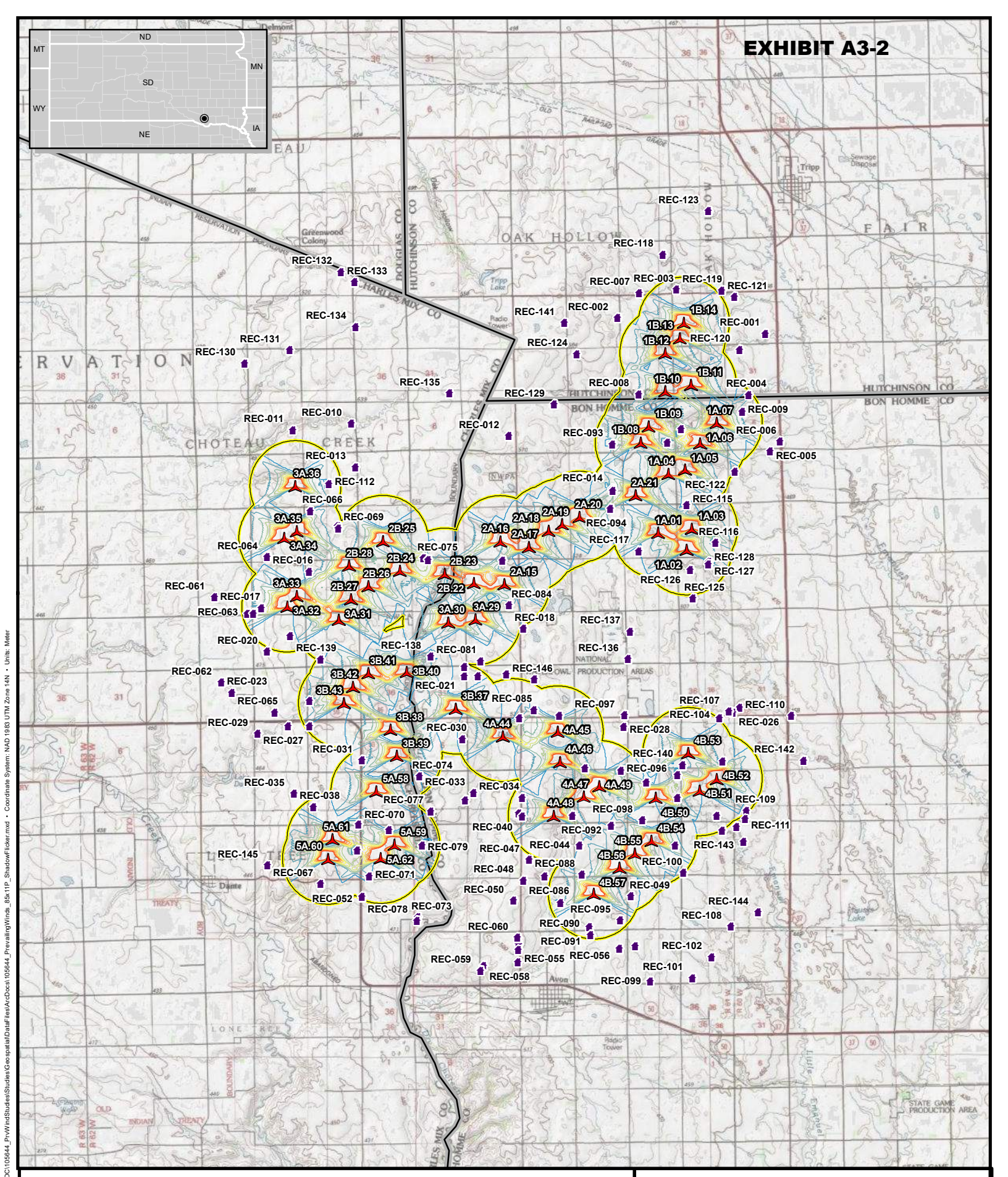
Receptor Name	Easting [m]	Northing [m]	County Name	Participating Status	Flicker Duration [hour/year]	Flicker Duration [max min/day]
REC-045*	580,460	4,766,528	Bon Homme	Participating	18.48	45
REC-046*	570,892	4,766,384	Charles Mix	Participating	46.25	76
REC-047	576,072	4,766,099	Bon Homme	Non-participating	0.00	0
REC-048	575,888	4,765,484	Bon Homme	Non-participating	0.00	0
REC-049	579,136	4,765,004	Bon Homme	Non-participating	4.85	27
REC-050	575,594	4,764,878	Bon Homme	Participating	0.00	0
REC-051*	577,015	4,764,806	Bon Homme	Participating	8.20	32
REC-052	571,035	4,764,976	Charles Mix	Non-participating	0.00	0
REC-053	575,752	4,763,554	Bon Homme	Non-participating	0.00	0
REC-054	579,261	4,763,509	Bon Homme	Non-participating	0.00	0
REC-055	575,738	4,763,383	Bon Homme	Non-participating	0.00	0
REC-056	578,784	4,763,423	Bon Homme	Non-participating	0.00	0
REC-057	575,729	4,763,021	Bon Homme	Non-participating	0.00	0
REC-058	574,690	4,762,906	Bon Homme	Non-participating	0.00	0
REC-059	574,609	4,762,765	Bon Homme	Non-participating	0.00	0
REC-060	575,719	4,763,759	Bon Homme	Non-participating	0.00	0
REC-061	566,590	4,774,005	Charles Mix	Non-participating	0.00	0
REC-062	566,795	4,771,446	Charles Mix	Non-participating	0.00	0
REC-063	567,576	4,773,523	Charles Mix	Non-participating	5.02	27
REC-064	568,170	4,775,222	Charles Mix	Non-participating	0.00	0
REC-065	568,402	4,770,548	Charles Mix	Non-participating	0.00	0
REC-066	569,475	4,776,605	Charles Mix	Participating	0.00	0
REC-067	569,782	4,765,374	Charles Mix	Non-participating	0.00	0
REC-068	570,301	4,776,152	Charles Mix	Non-participating	3.13	24
REC-069	570,321	4,776,086	Charles Mix	Non-participating	3.20	24
REC-070*	570,931	4,767,169	Charles Mix	Non-participating	8.80	36
REC-071	571,247	4,765,598	Charles Mix	Non-participating	11.72	25
REC-072	571,848	4,767,001	Charles Mix	Participating	0.00	0
REC-073	572,712	4,764,371	Charles Mix	Non-participating	0.00	0
REC-074	572,760	4,768,610	Bon Homme	Non-participating	0.00	0
REC-075*	572,875	4,775,184	Charles Mix	Participating	20.17	42
REC-076*	573,024	4,775,138	Charles Mix	Non-participating	33.90	51
REC-077	573,104	4,767,559	Bon Homme	Non-participating	0.00	0
REC-078	572,690	4,764,270	Charles Mix	Non-participating	0.00	0
REC-079*	572,840	4,766,532	Charles Mix	Participating	0.00	0
REC-080	574,527	4,771,635	Bon Homme	Participating	0.00	0
REC-081	574,606	4,772,084	Bon Homme	Participating	0.00	0
REC-082*	575,265	4,775,117	Bon Homme	Participating	8.75	31
REC-083	575,384	4,771,696	Bon Homme	Participating	0.00	0
REC-084	575,460	4,773,772	Bon Homme	Participating	4.85	29
REC-085*	576,210	4,770,611	Bon Homme	Participating	0.00	0
REC-086	576,538	4,765,598	Bon Homme	Participating	0.00	0
REC-087	576,971	4,770,447	Bon Homme	Participating	0.00	0
REC-088	577,660	4,765,661	Bon Homme	Participating	5.57	28
REC-089*	577,747	4,768,860	Bon Homme	Participating	24.83	42

Receptor Name	Easting [m]	Northing [m]	County Name	Participating Status	Flicker Duration [hour/year]	Flicker Duration [max min/day]
REC-090	577,878	4,764,079	Bon Homme	Non-participating	0.00	0
REC-091	577,916	4,763,844	Bon Homme	Non-participating	0.00	0
REC-092	578,532	4,767,119	Bon Homme	Participating	3.78	24
REC-093*	578,576	4,778,619	Bon Homme	Participating	20.83	37
REC-094*	578,515	4,776,677	Bon Homme	Participating	12.23	38
REC-095	578,804	4,764,275	Bon Homme	Non-participating	0.00	0
REC-096*	578,828	4,768,793	Bon Homme	Non-participating	22.47	54
REC-097	578,943	4,770,455	Bon Homme	Non-participating	0.00	0
REC-098	579,475	4,767,289	Bon Homme	Non-participating	0.00	0
REC-099	579,721	4,762,442	Bon Homme	Participating	0.00	0
REC-100	580,720	4,765,706	Bon Homme	Non-participating	0.00	0
REC-101	580,992	4,762,541	Bon Homme	Non-participating	0.00	0
REC-102	581,560	4,763,175	Bon Homme	Non-participating	0.00	0
REC-103	581,721	4,767,420	Bon Homme	Participating	0.00	0
REC-104	581,794	4,770,381	Bon Homme	Non-participating	0.00	0
REC-105*	581,891	4,769,063	Bon Homme	Non-participating	0.00	0
REC-106	581,883	4,766,985	Bon Homme	Participating	0.00	0
REC-107	582,090	4,770,568	Bon Homme	Non-participating	0.00	0
REC-108	582,148	4,764,102	Bon Homme	Participating	0.00	0
REC-109	582,610	4,767,583	Bon Homme	Non-participating	0.00	0
REC-110	583,963	4,770,430	Bon Homme	Non-participating	0.00	0
REC-111	582,578	4,767,332	Bon Homme	Non-participating	0.00	0
REC-112*	570,034	4,777,429	Charles Mix	Non-participating	5.37	31
REC-113*	580,226	4,778,670	Bon Homme	Participating	5.92	31
REC-114*	580,644	4,779,066	Bon Homme	Participating	32.80	46
REC-115	580,813	4,776,798	Bon Homme	Participating	1.73	17
REC-116*	581,676	4,775,654	Bon Homme	Participating	0.00	0
REC-117	579,368	4,775,404	Bon Homme	Participating	0.00	0
REC-118	580,095	4,784,337	Hutchinson	Non-participating	0.00	0
REC-119	581,868	4,783,246	Hutchinson	Non-participating	0.00	0
REC-120	582,411	4,781,467	Hutchinson	Non-participating	0.00	0
REC-121	582,256	4,783,055	Hutchinson	Non-participating	0.00	0
REC-122	582,261	4,777,793	Bon Homme	Participating	0.00	0
REC-123	581,461	4,785,646	Hutchinson	Non-participating	0.00	0
REC-124	577,505	4,781,336	Hutchinson	Non-participating	0.00	0
REC-125	580,996	4,773,976	Bon Homme	Non-participating	0.00	0
REC-126	580,916	4,774,830	Bon Homme	Participating	0.00	0
REC-127*	581,474	4,775,076	Bon Homme	Participating	0.00	0
REC-128	581,468	4,774,997	Bon Homme	Participating	0.00	0
REC-129	576,816	4,779,814	Bon Homme	Non-participating	0.00	0
REC-130	567,502	4,781,060	Charles Mix	Non-participating	0.00	0
REC-131	568,850	4,781,446	Charles Mix	Non-participating	0.00	0
REC-132	570,408	4,783,811	Charles Mix	Non-participating	0.00	0
REC-133	570,806	4,783,497	Charles Mix	Non-participating	0.00	0
REC-134	570,845	4,782,153	Charles Mix	Non-participating	0.00	0

Receptor Name	Easting [m]	Northing [m]	County Name	Participating Status	Flicker Duration [hour/year]	Flicker Duration [max min/day]
REC-135	573,665	4,780,153	Charles Mix	Non-participating	0.00	0
REC-136	579,049	4,772,150	Bon Homme	Non-participating	0.00	0
REC-137	579,104	4,772,978	Bon Homme	Non-participating	0.00	0
REC-138*	573,105	4,772,224	Bon Homme	Participating	0.00	0
REC-139	569,781	4,772,134	Charles Mix	Non-participating	6.15	26
REC-140	580,689	4,768,952	Bon Homme	Non-participating	5.27	29
REC-141	577,130	4,782,270	Hutchinson	Non-participating	0.00	0
REC-142	584,340	4,769,093	Bon Homme	Non-participating	0.00	0
REC-143	582,522	4,766,643	Bon Homme	Non-participating	0.00	0
REC-144	582,964	4,764,514	Bon Homme	Non-participating	0.00	0
REC-145	568,186	4,765,929	Charles Mix	Non-participating	0.00	0
REC-146	576,221	4,771,527	Bon Homme	Participating	0.00	0
REC-147	575,778	4,770,361	Bon Homme	Participating	15.03	43
REC-148	568,806	4,770,128	Charles Mix	Non-participating	0.00	0
REC-149	567,763	4,773,526	Charles Mix	Non-participating	7.35	31

Notes:
[1] All coordinates presented in UTM NAD83 Zone 14N (meters)
[2] All results based on turbine layout in Table B-1
[3] * Indicates receptor that was analyzed with obstacles.

APPENDIX G - SHADOW FLICKER DURATION MAP



Path: \\bmcdds\Clients\BTS\SPowerDC\105644_PrvWindStudies\Studies\GeospatialData\FilesArcDocs\105644_PrevailingWinds_85x11P_ShadowFlicker.mxd • Coordinate System: NAD 1983 UTM Zone 14N • Units: Meter

LEGEND

- County Boundary
- Wind Turbine
- Receptor
- Wind Turbine Buffer (1370m)

Shadow Flicker Vectors [hours per year]

0 10 20 30 40 50 60 70 80 90 100

REFERENCE

0 1.5 3 MILES

0 1.5 3 KILOMETERS

N

PREVAILING WIND PARK

Shadow Flicker Duration [Hr/Yr] - GE 3.8-137 Layout

LOCATION:	Charles Mix/Bonne Homme/Hutchinson Cty, SD
CLIENT:	Prevailing Wind Park, LLC
PROJ. NO.:	105644
CREATED:	10/03/2018

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www.burnsmcd.com

APPENDIX H - SHADOW FLICKER CALENDAR

Project:
sPower Shadow Flicker

Description:
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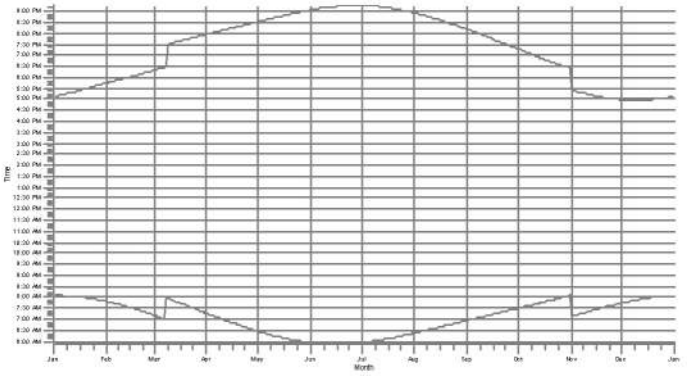
Calculated:
10/3/2018 3:53 PM/3.0.654

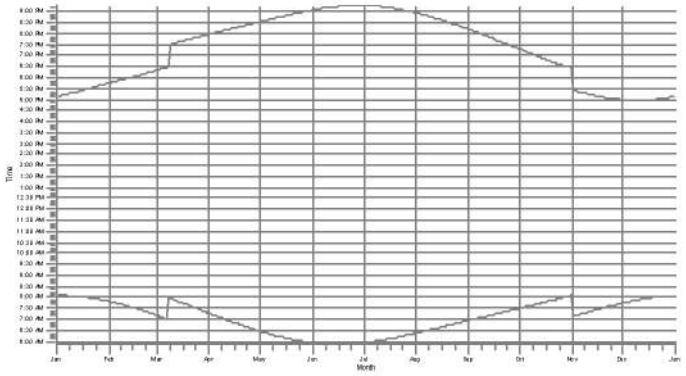
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

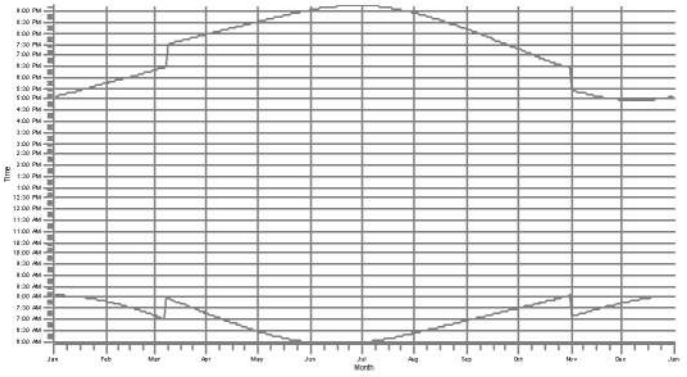
REC-001: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (1)



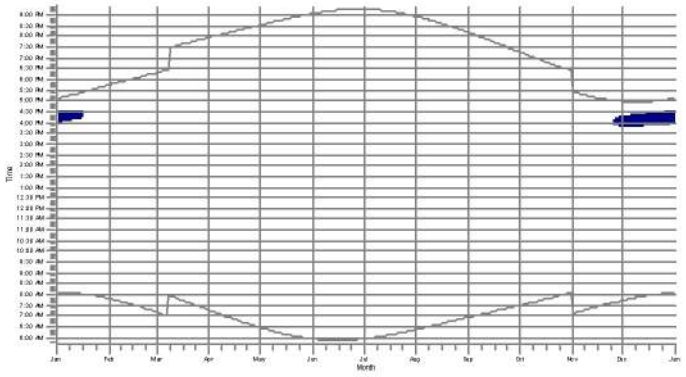
REC-002: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (2)



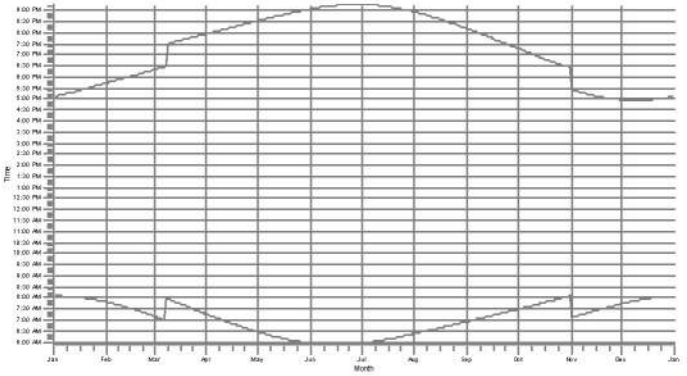
REC-003: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (3)



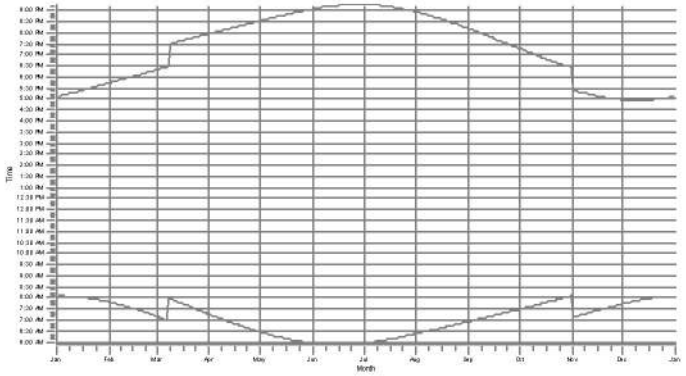
REC-004: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (4)



REC-005: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (5)



REC-006: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (6)



WTGs

1A.07: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (295)

Project:
sPower Shadow Flicker

Description:
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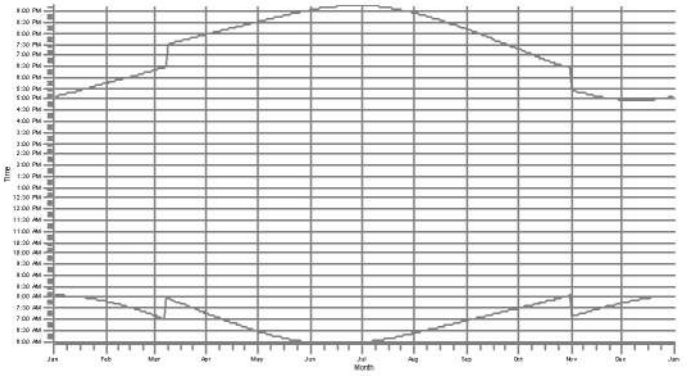
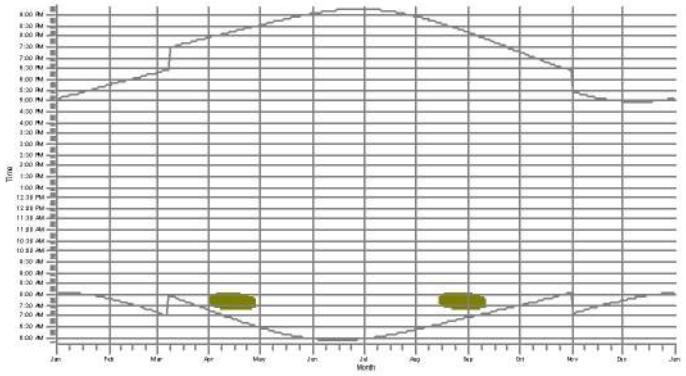
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

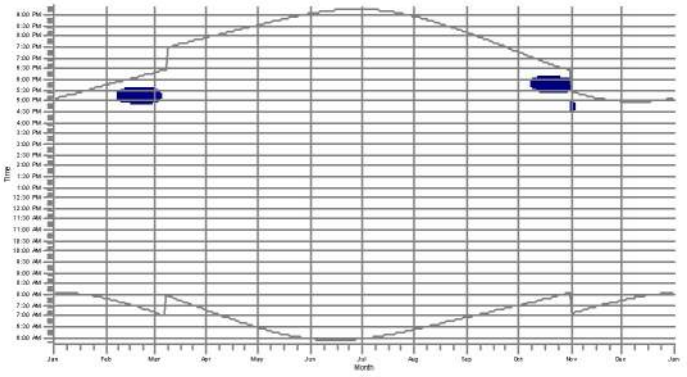
REC-007: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (7)



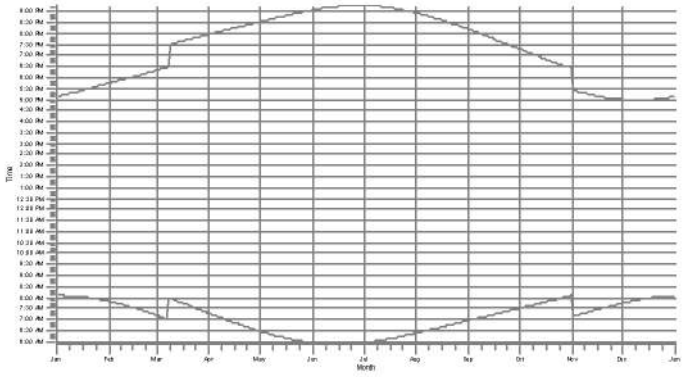
REC-008: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (8)



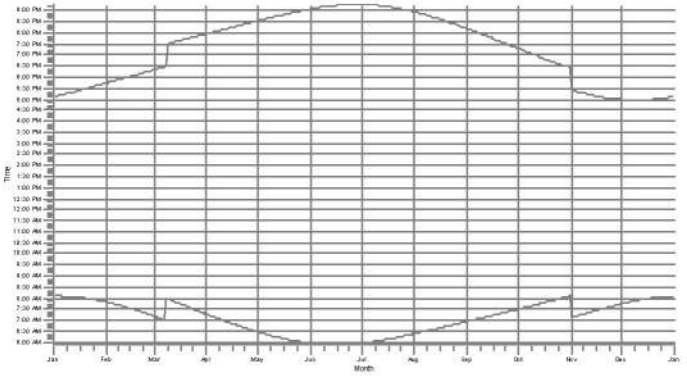
REC-009: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (9)



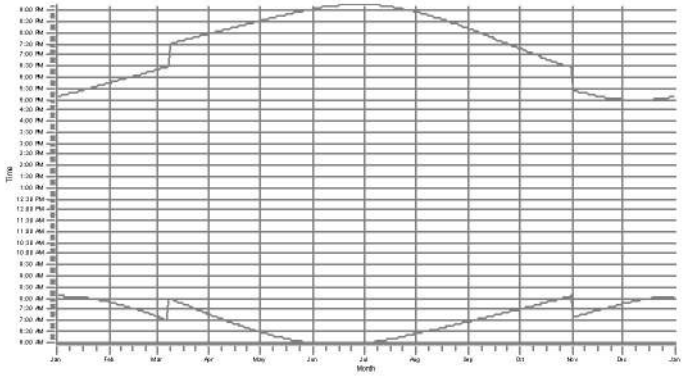
REC-010: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (10)



REC-011: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (11)



REC-012: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (12)



WTGs

1A.07: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (295)

1B.10: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (298)

Project:
sPower Shadow Flicker

Description:
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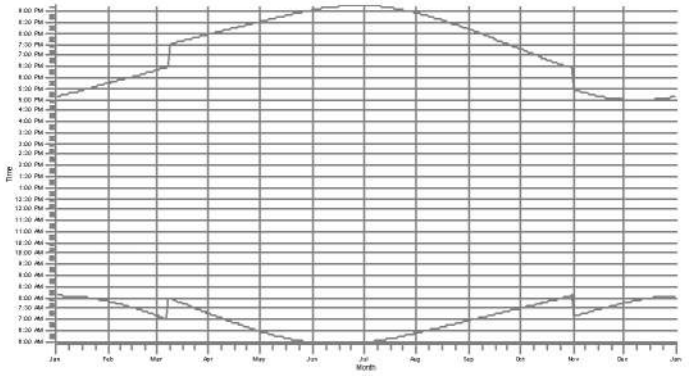
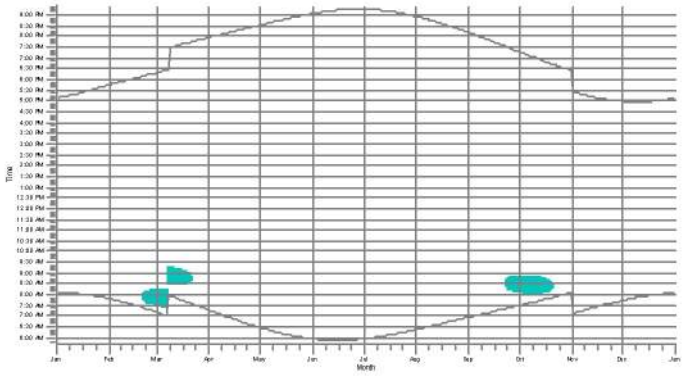
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

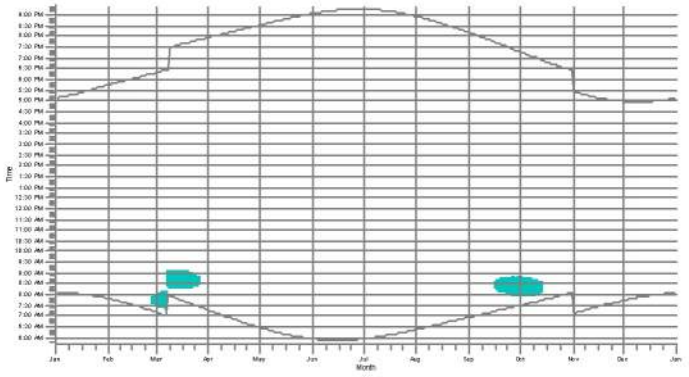
REC-013: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (13)



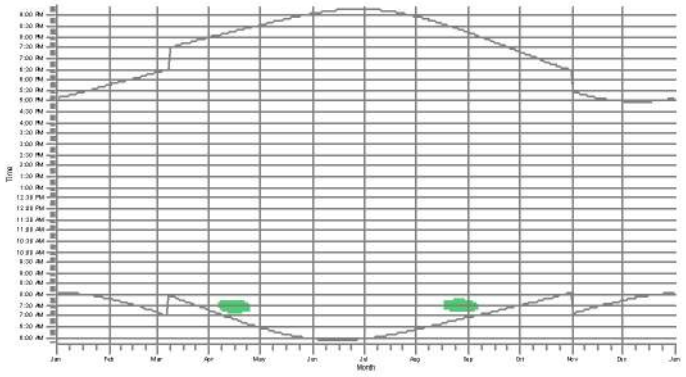
REC-014: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (14)



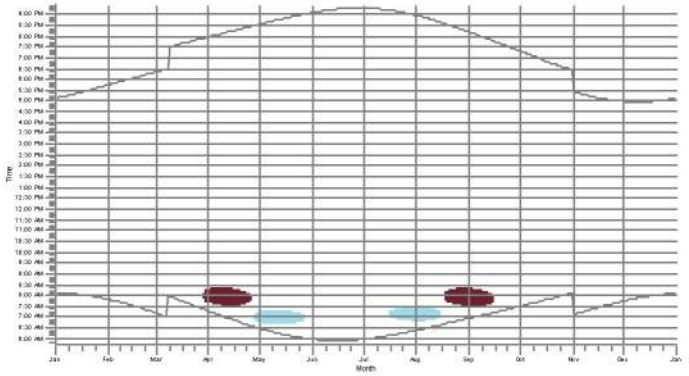
REC-015: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (15)



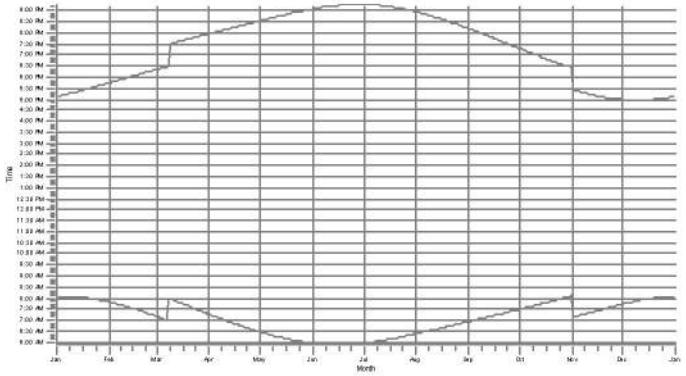
REC-016: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (16)



REC-017: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (17)



REC-018: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (18)



WTGs

2A.21: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (309)
2B.28: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (316)
3A.32: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (320)
3A.33: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (321)

Project:
sPower Shadow Flicker

Description:
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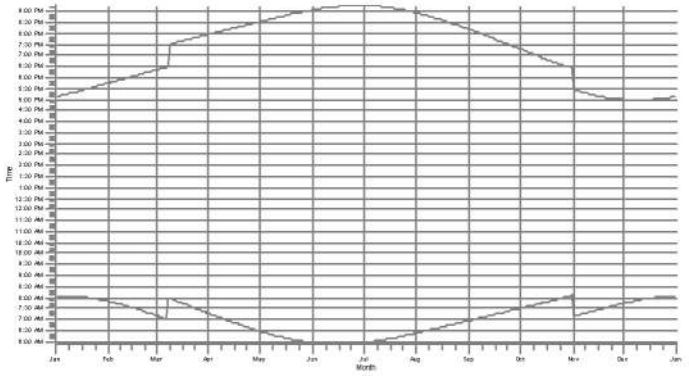
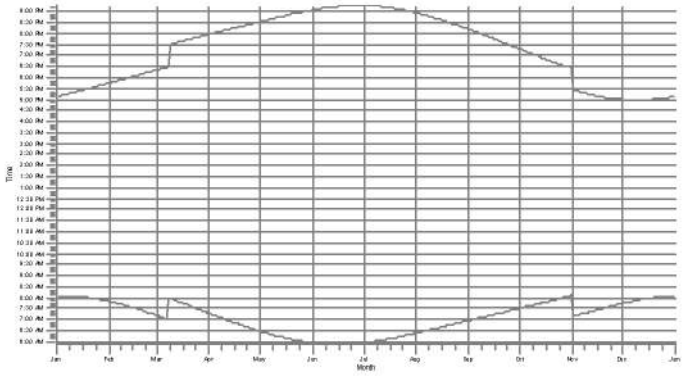
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

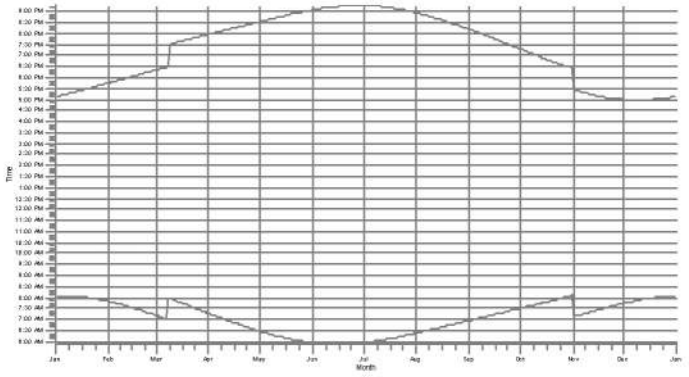
REC-019: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (19)



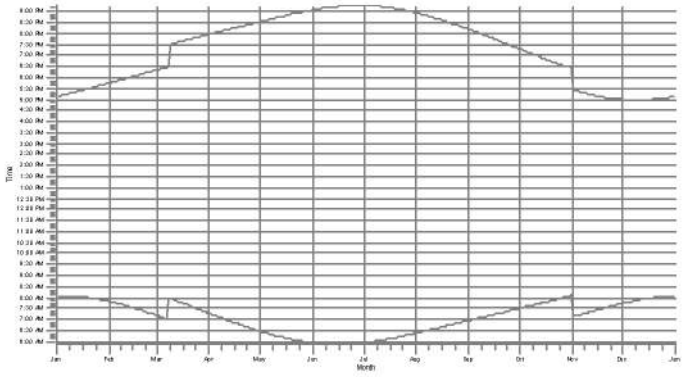
REC-020: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (20)



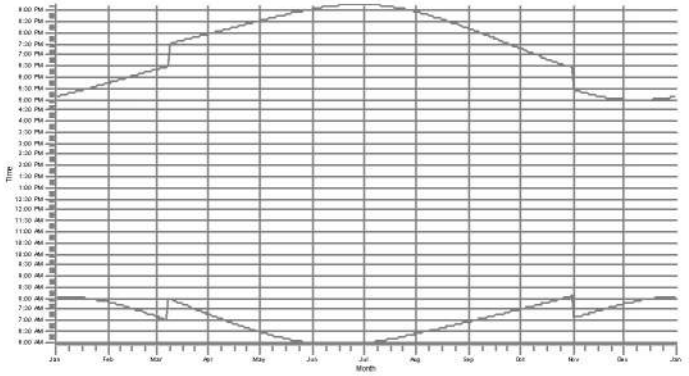
REC-021: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (21)



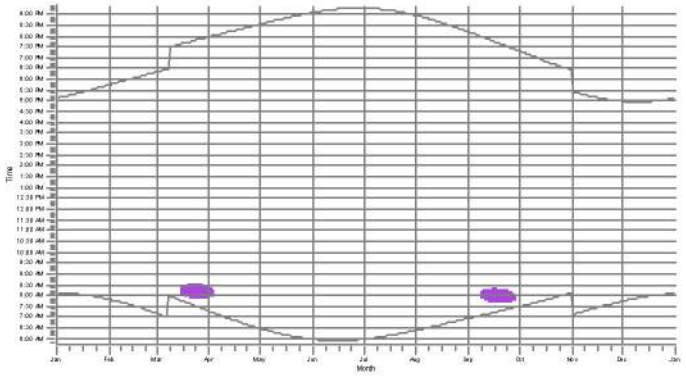
REC-022: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (22)



REC-023: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (23)



REC-024: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (24)



WTGs

3B.43: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (331)

Project:
sPower Shadow Flicker

Description:
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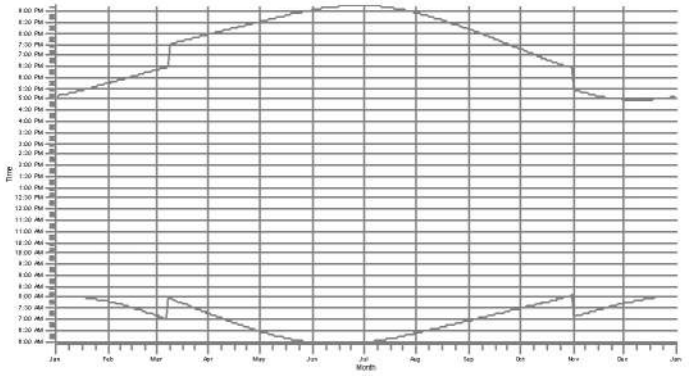
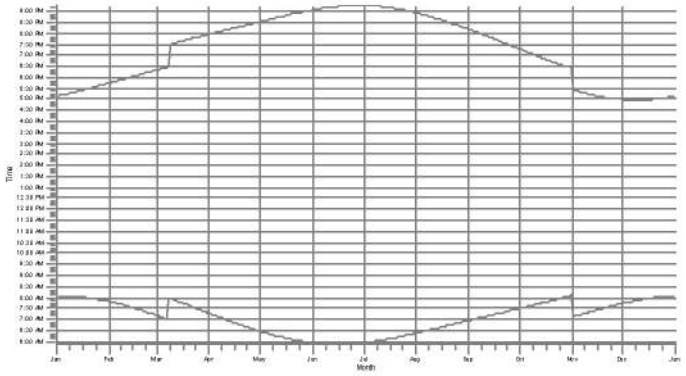
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

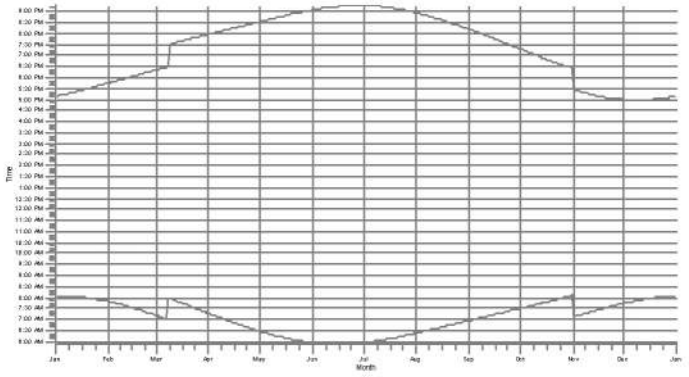
REC-025: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (25)



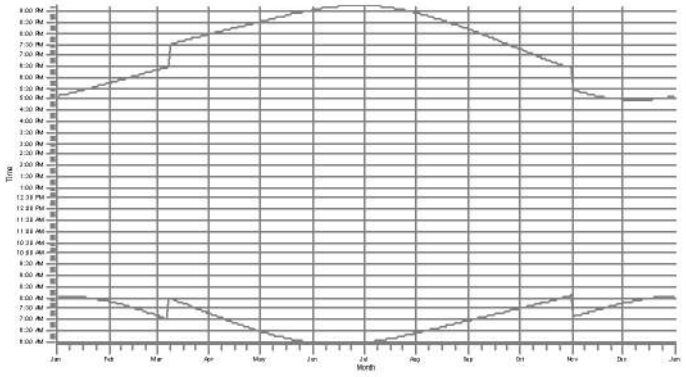
REC-026: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (26)



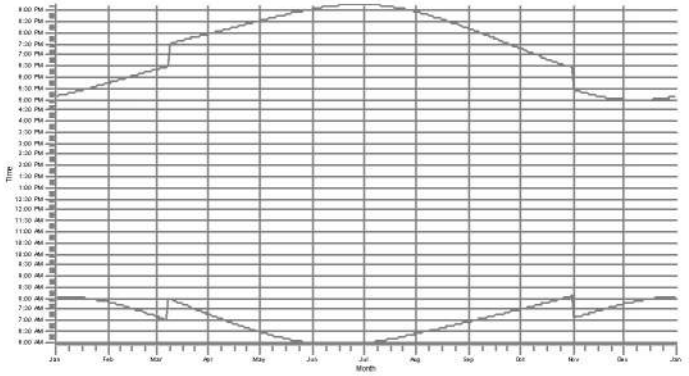
REC-027: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (27)



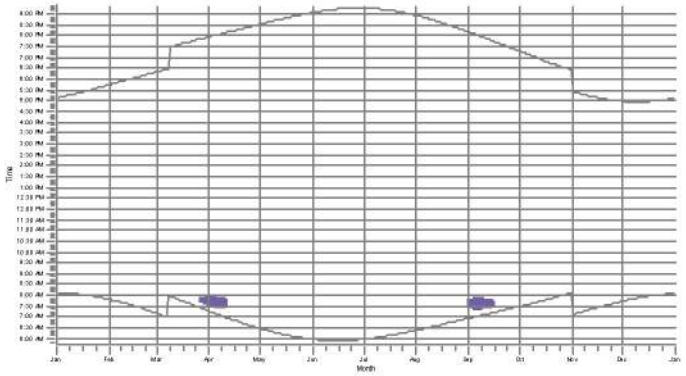
REC-028: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (28)



REC-029: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (29)



REC-030: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (30)



WTGs

4A.44: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (332)

Project:
sPower Shadow Flicker

Description:
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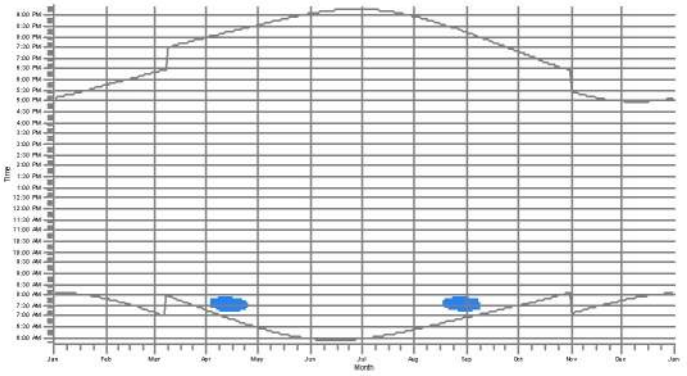
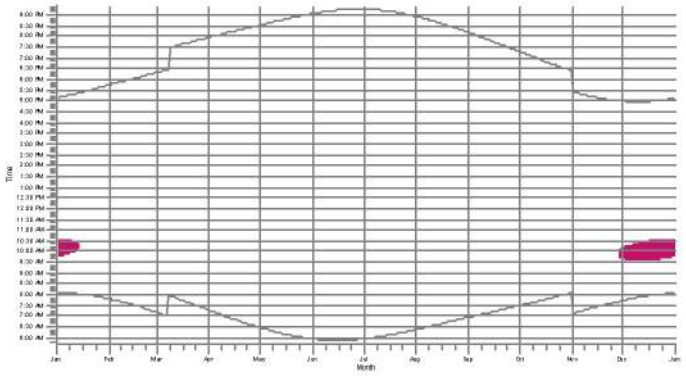
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

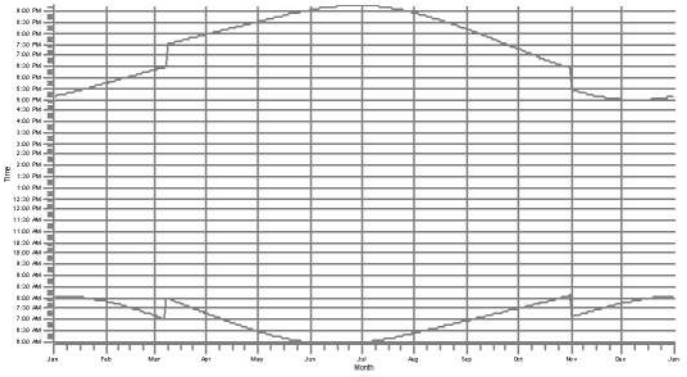
REC-031: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (31)



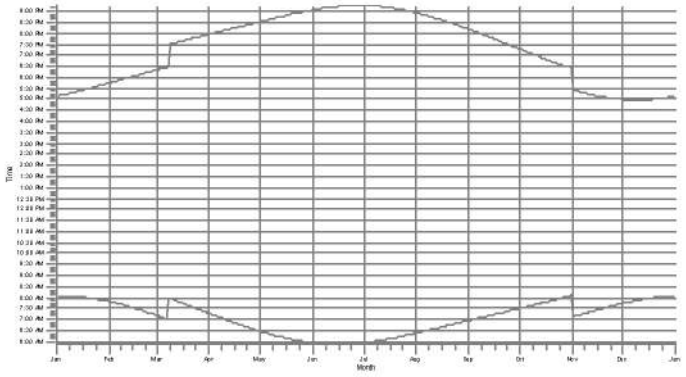
REC-032: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (32)



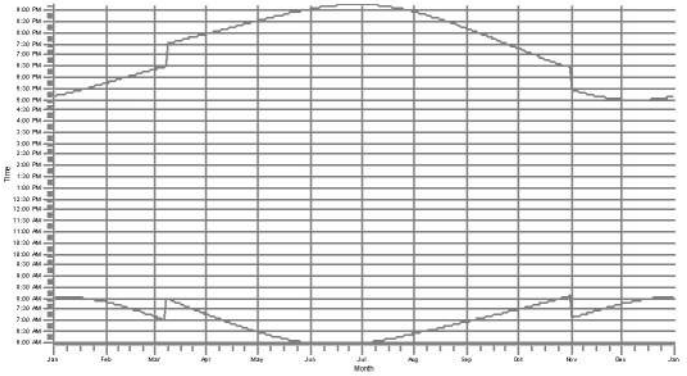
REC-033: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (33)



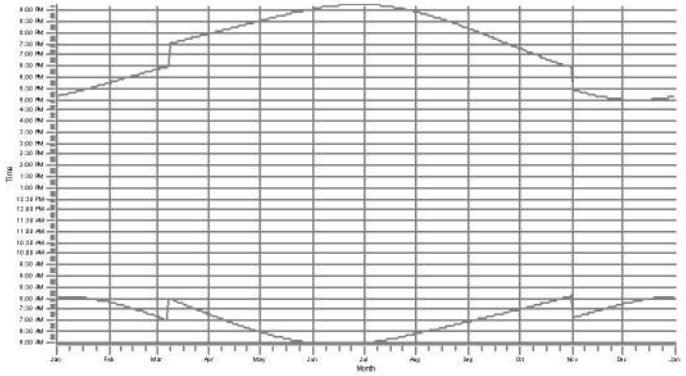
REC-034: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (34)



REC-035: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (35)



REC-036: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (36)



WTGs

38.39: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (327)

48.50: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (338)

Project:
sPower Shadow Flicker

Description:
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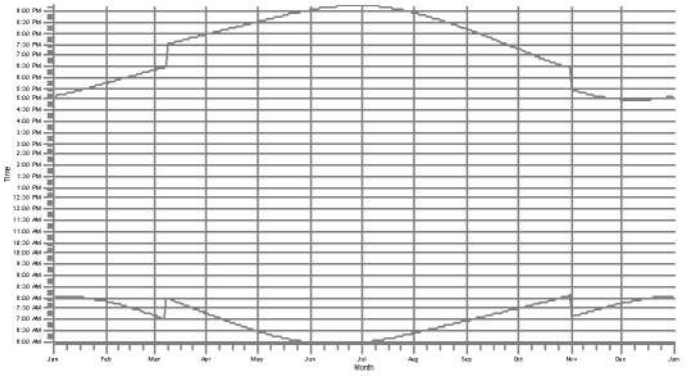
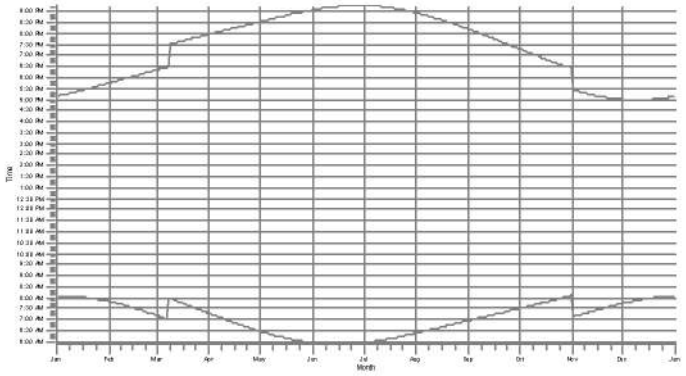
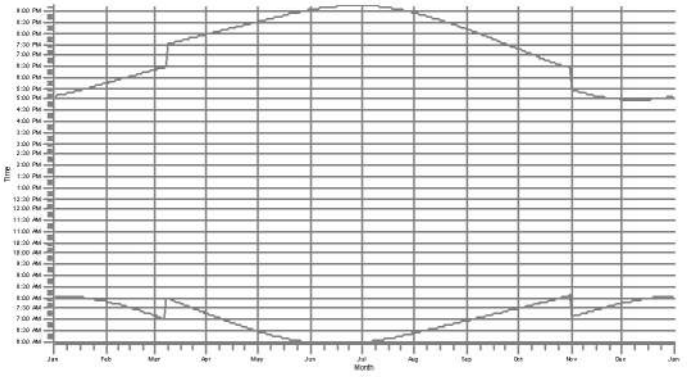
REC-037: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (37)



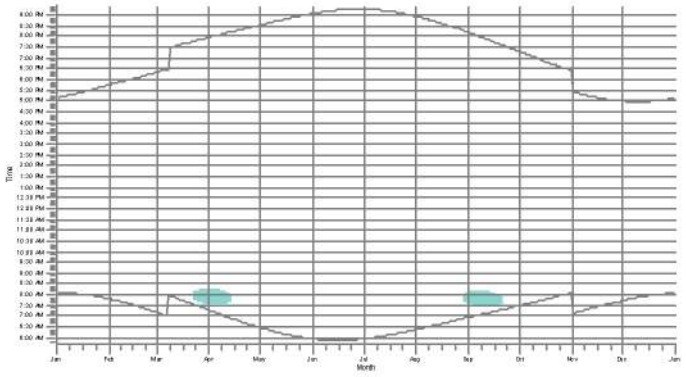
REC-038: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (38)



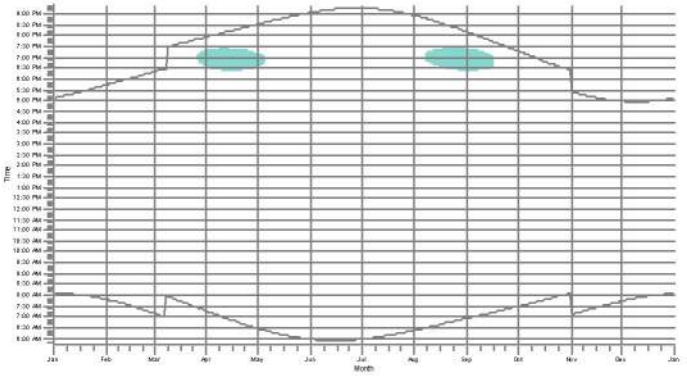
REC-039: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (39)



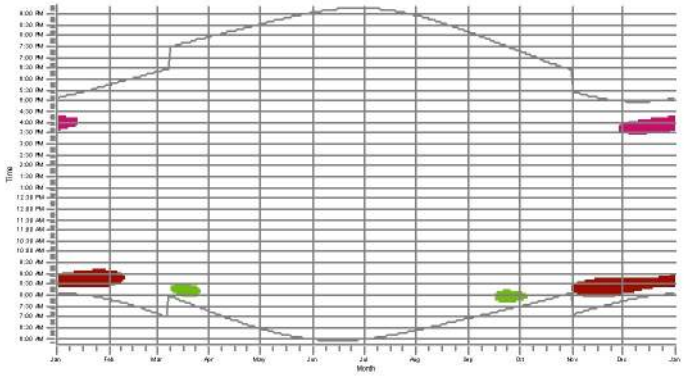
REC-040: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (40)



REC-041: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (41)



REC-042: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (42)



WTGs

4A.48: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (336)
48.50: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (338)
48.51: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (339)
48.52: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (340)

Project:
sPower Shadow Flicker

Description:
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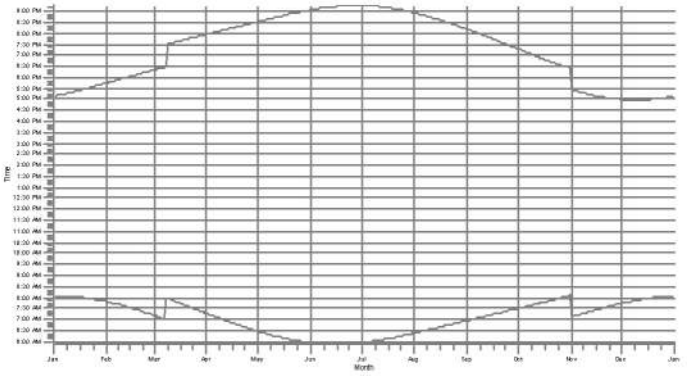
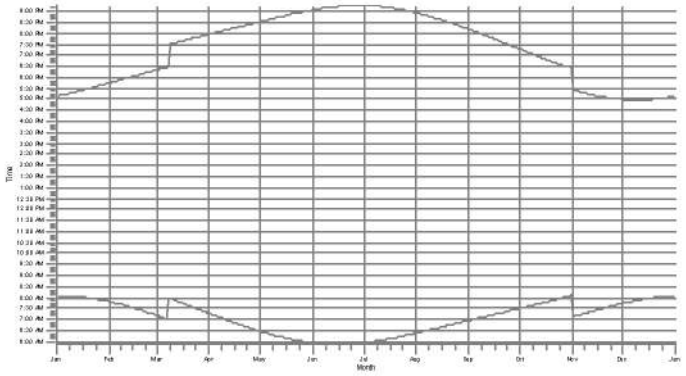
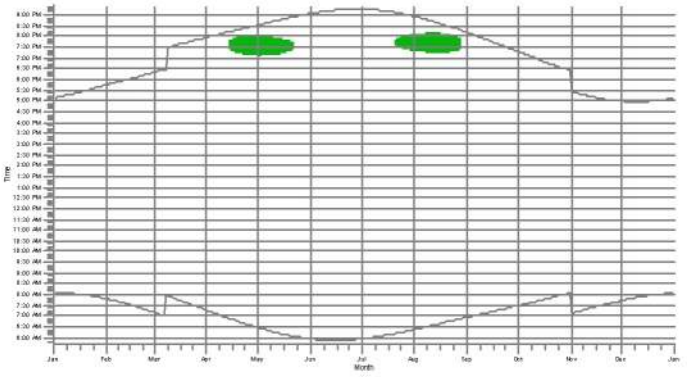
REC-043: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (43)



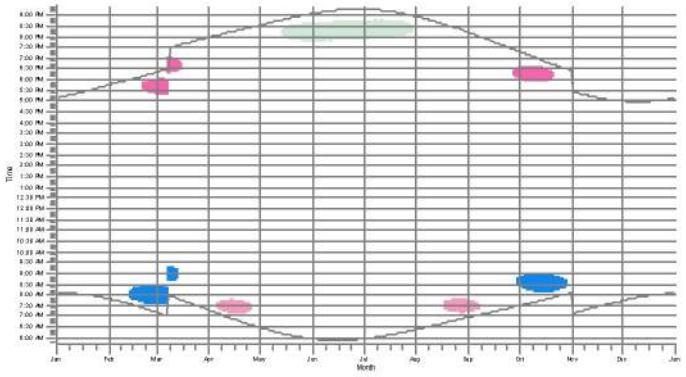
REC-044: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (44)



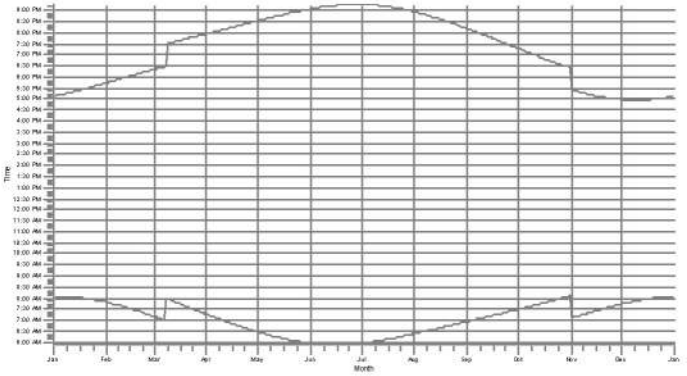
REC-045: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (45)



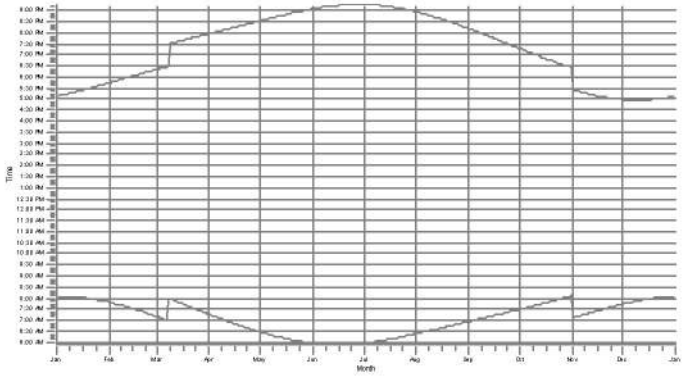
REC-046: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (46)



REC-047: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (47)



REC-048: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (48)



WTGs

48.54: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (342)
5A.59: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (347)
5A.60: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (348)
5A.61: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (349)
5A.62: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (350)

Project:
sPower Shadow Flicker

Description:
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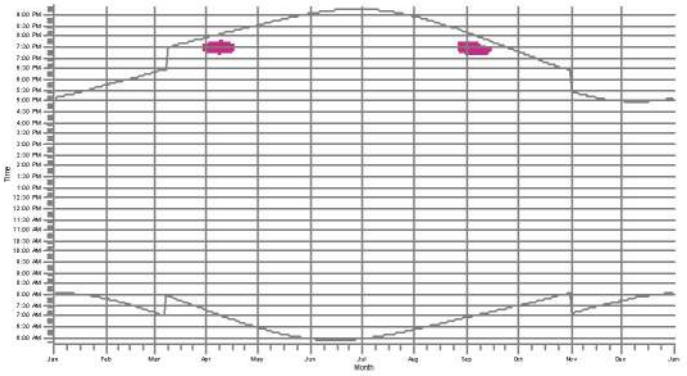
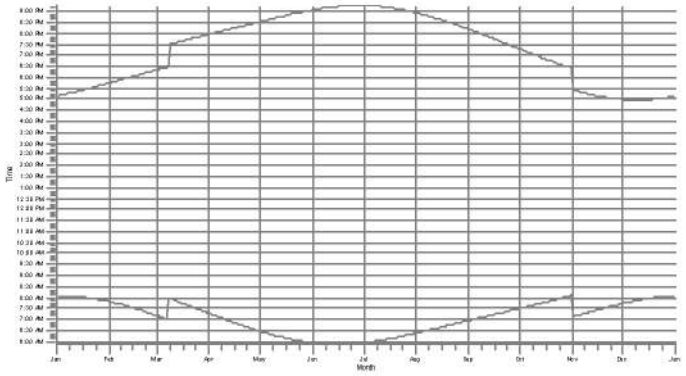
Calculation: Results.v6.62xGE3.8_wObstacles_noMap

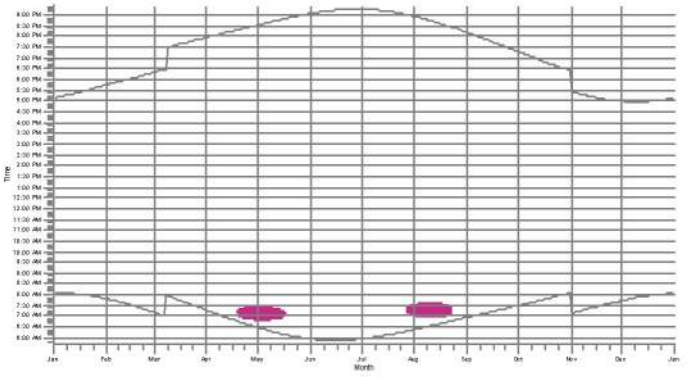
REC-049: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (49)



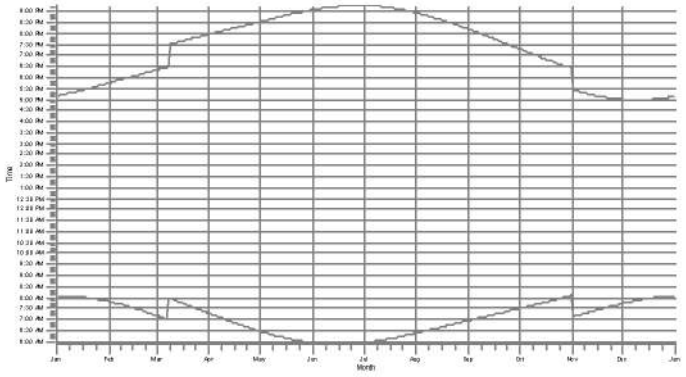
REC-050: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (50)



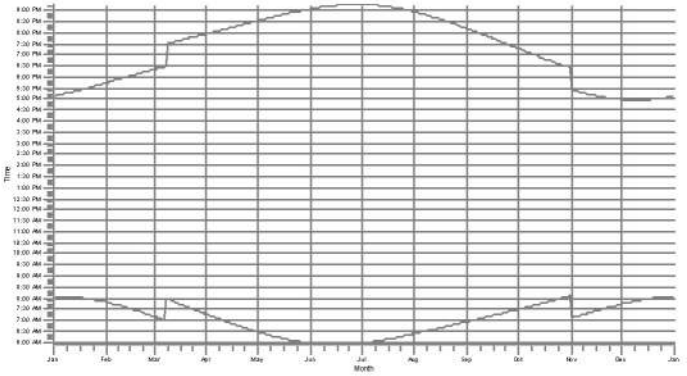
REC-051: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (51)



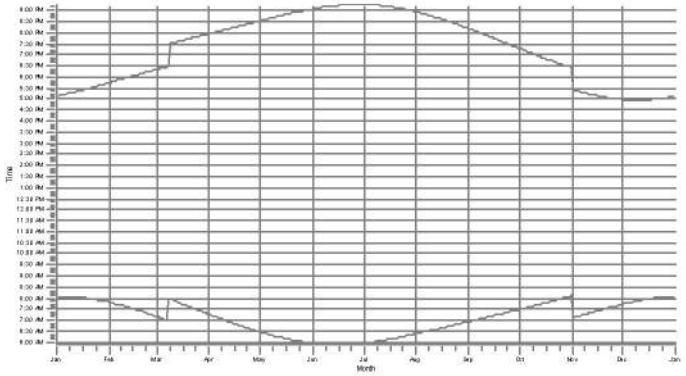
REC-052: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (52)



REC-053: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (53)



REC-054: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (54)



WTGs

48.57: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (345)

Project:
sPower Shadow Flicker

Description:
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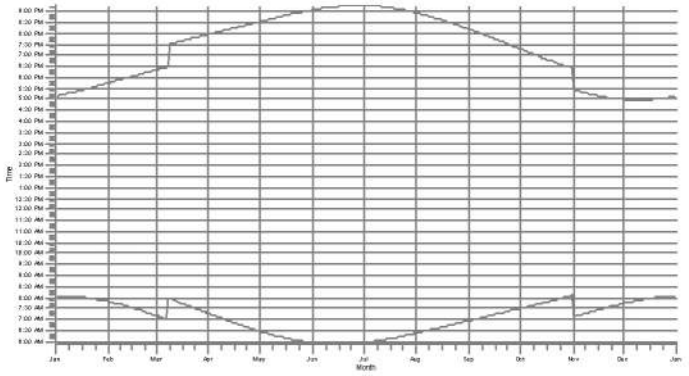
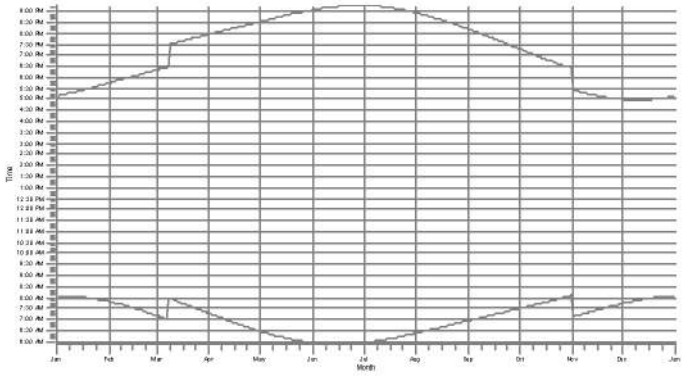
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

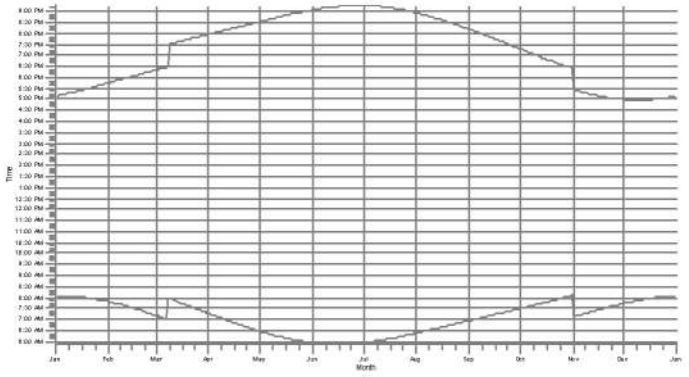
REC-055: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (55)



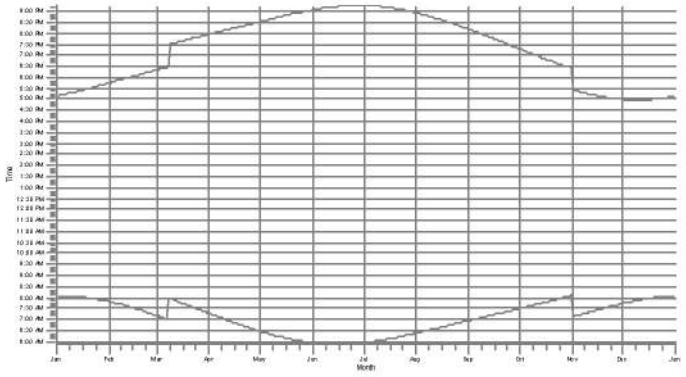
REC-056: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (56)



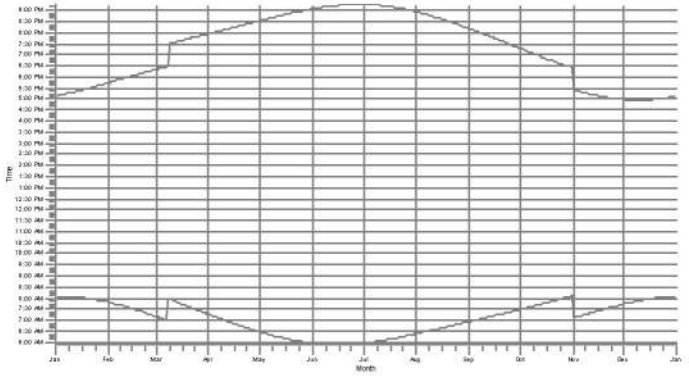
REC-057: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (57)



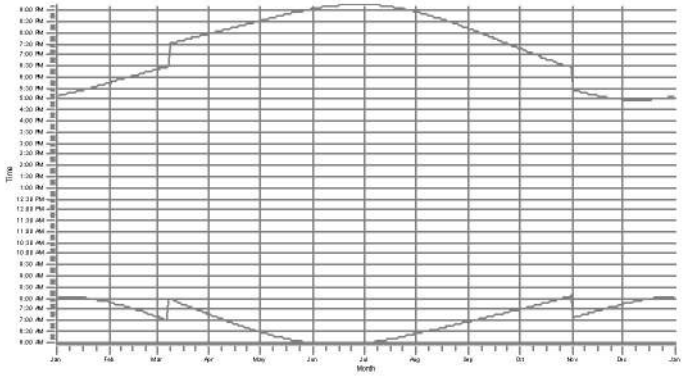
REC-058: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (58)



REC-059: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (59)



REC-060: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (60)



WTGs

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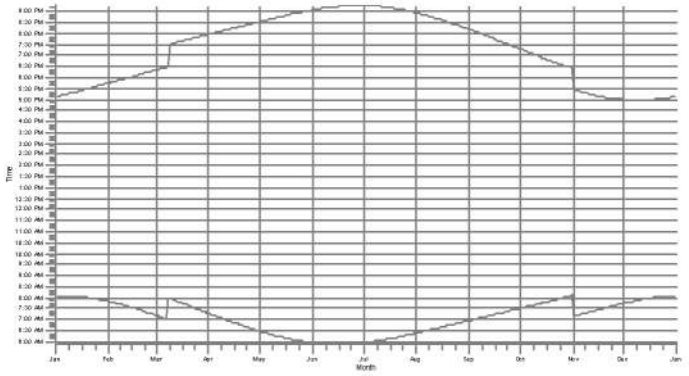
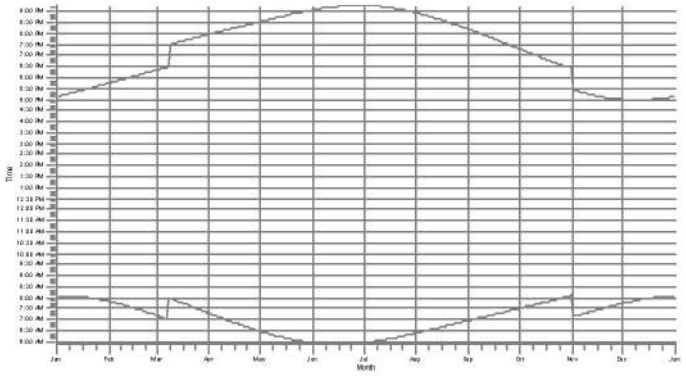
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

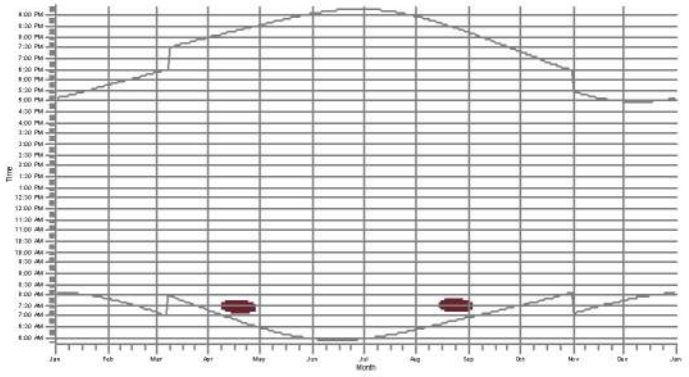
REC-061: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (61)



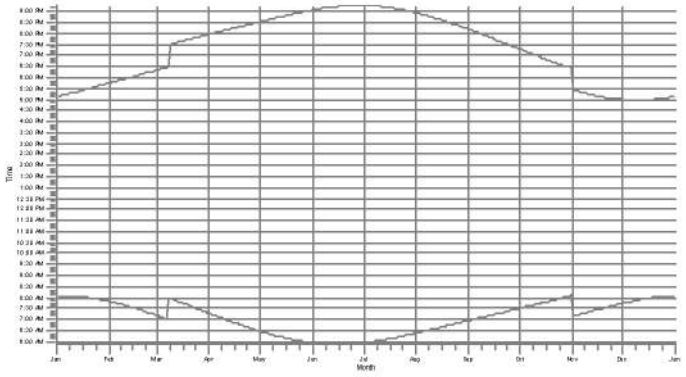
REC-062: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (62)



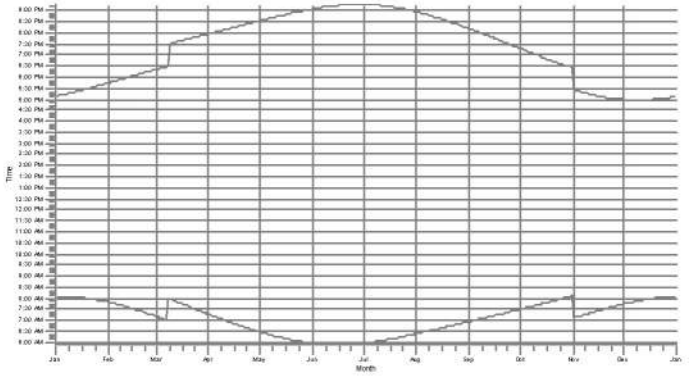
REC-063: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (63)



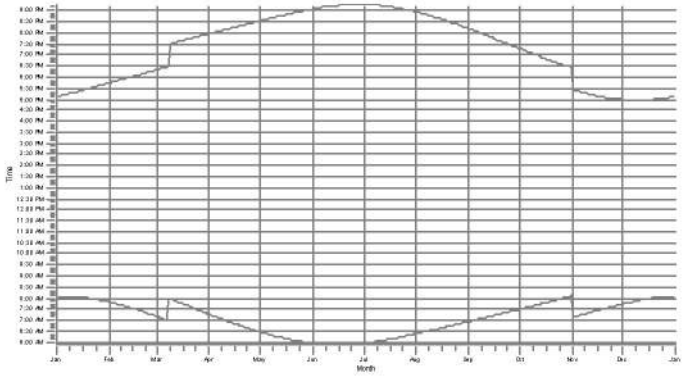
REC-064: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (64)



REC-065: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (65)



REC-066: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (66)



WTGs

3A.32: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (320)

Project:
sPower Shadow Flicker

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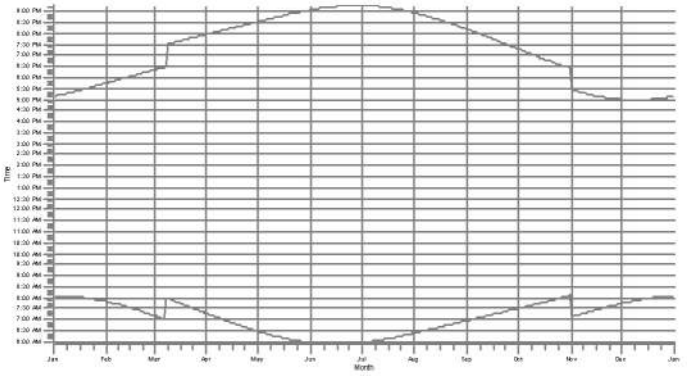
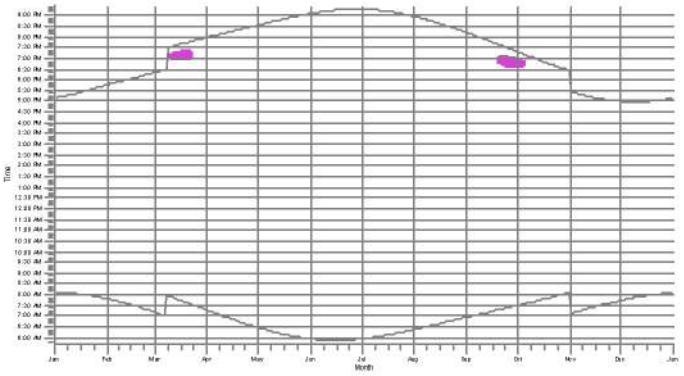
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

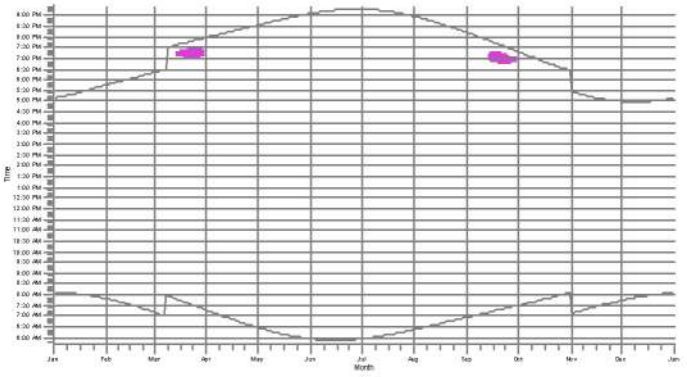
REC-067: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (67)



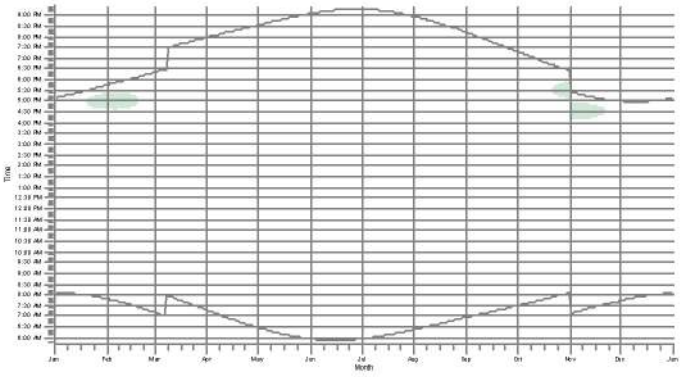
REC-068: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (68)



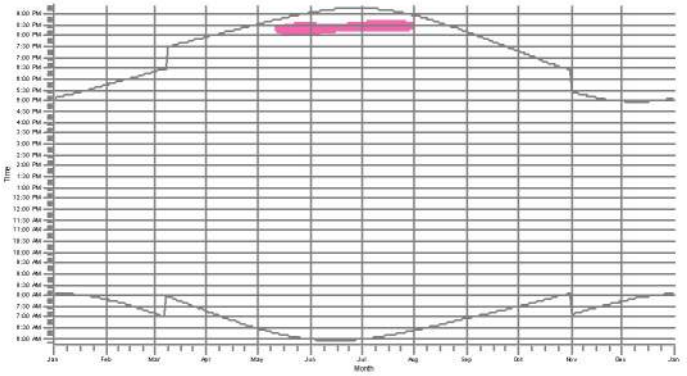
REC-069: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (69)



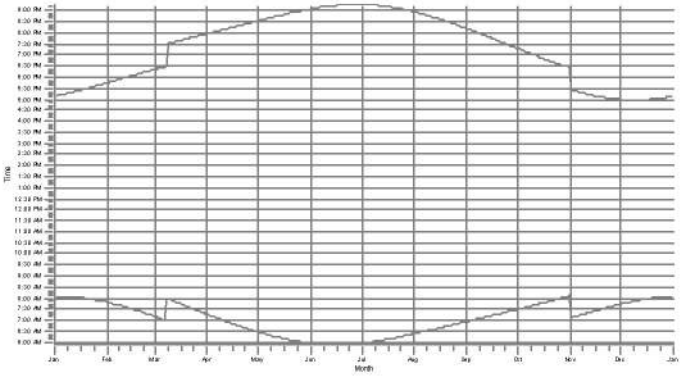
REC-070: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (70)



REC-071: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (71)



REC-072: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (72)



WTGs

3A.35: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (323)
5A.60: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (348)
5A.61: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (349)

Project:
sPower Shadow Flicker

Description:
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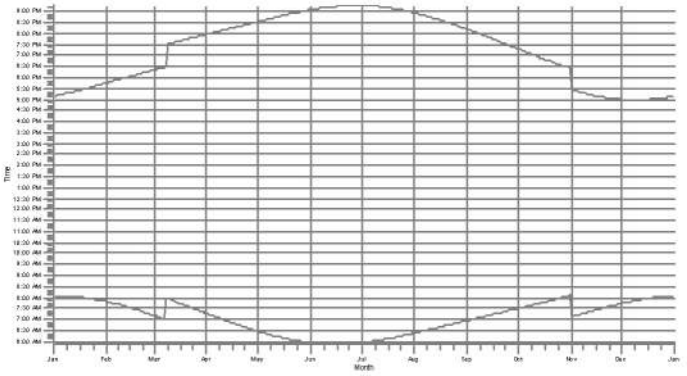
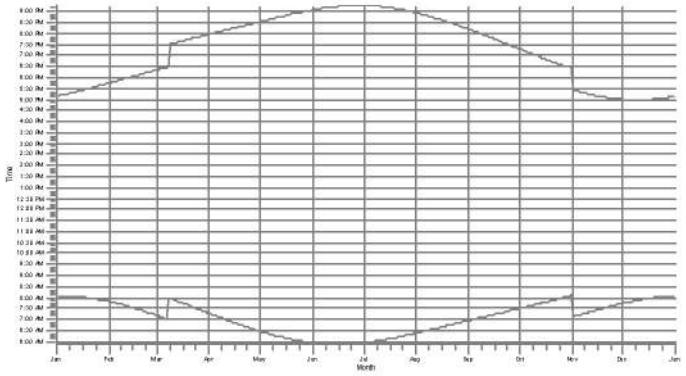
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

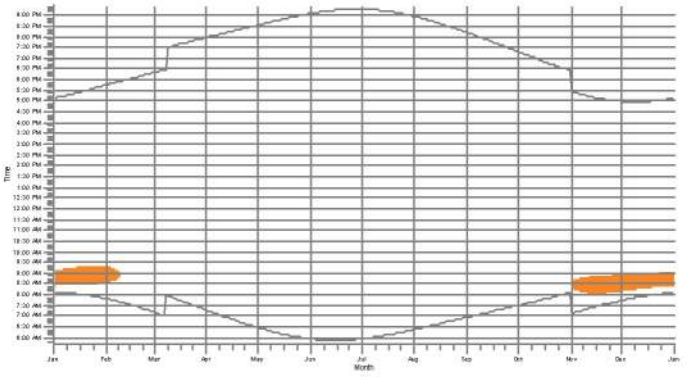
REC-073: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (73)



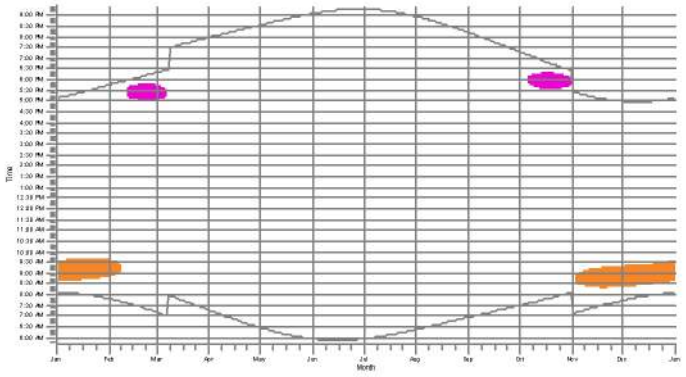
REC-074: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (74)



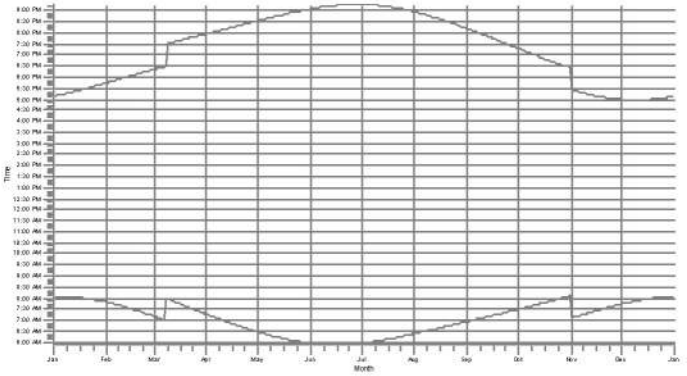
REC-075: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (75)



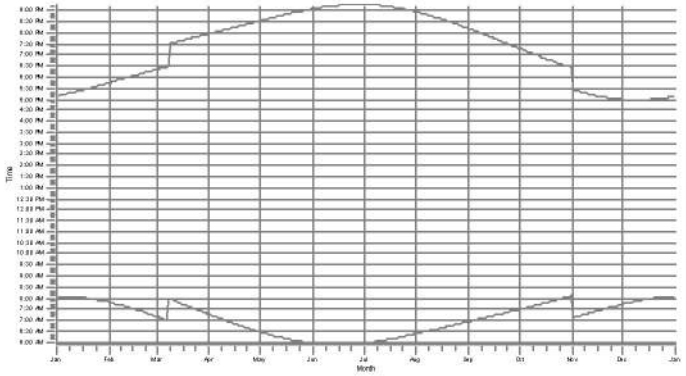
REC-076: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (76)



REC-077: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (77)



REC-078: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (78)



WTGs

2B.23: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (311)

2B.24: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (312)

Project:
sPower Shadow Flicker

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SHADOW - Calendar, graphical

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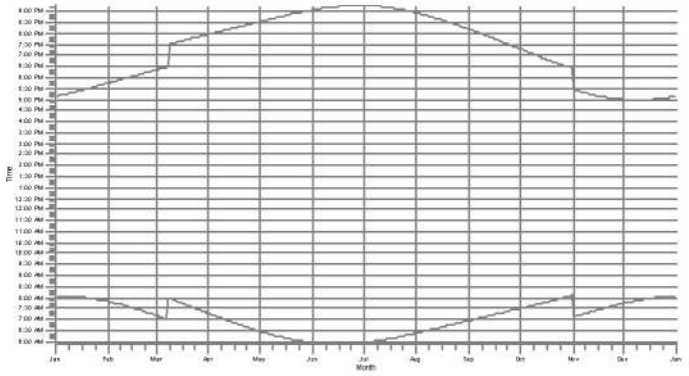
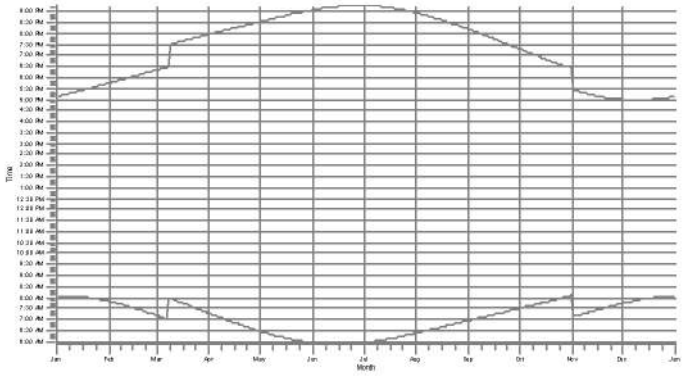
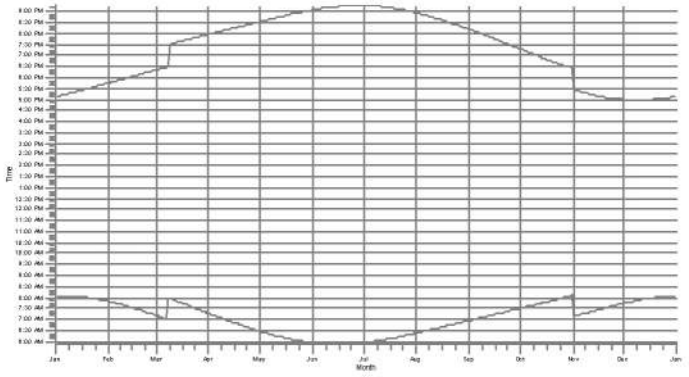
REC-079: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (79)



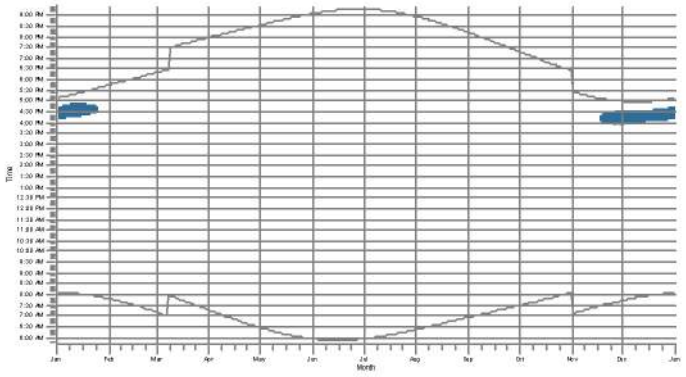
REC-080: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (80)



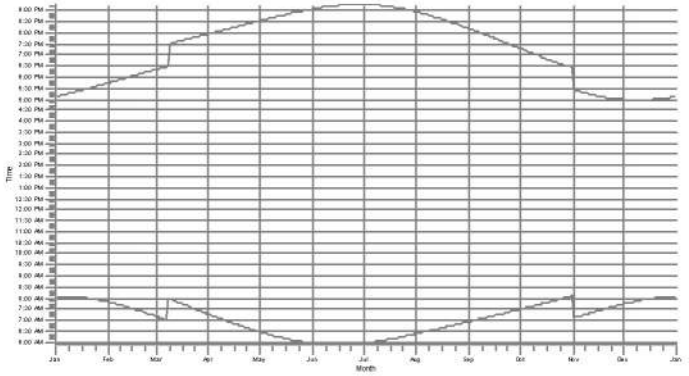
REC-081: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (81)



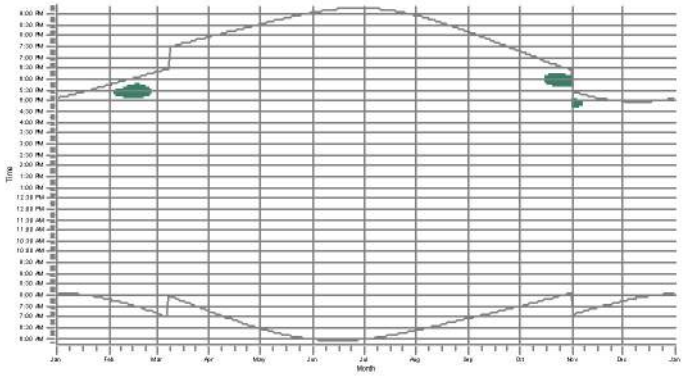
REC-082: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (82)



REC-083: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (83)



REC-084: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (84)



WTGs

2B.22: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (310)

3A.29: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (317)

Project:
sPower Shadow Flicker

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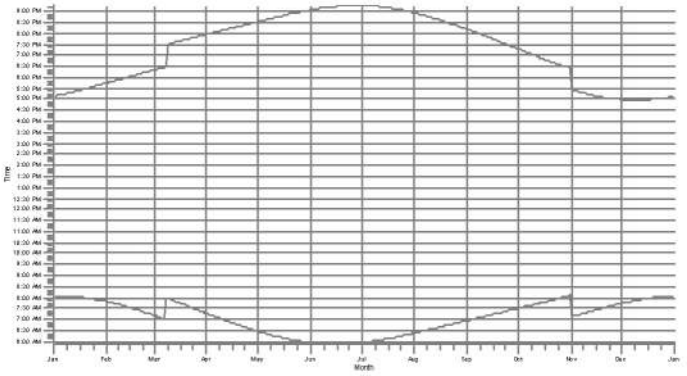
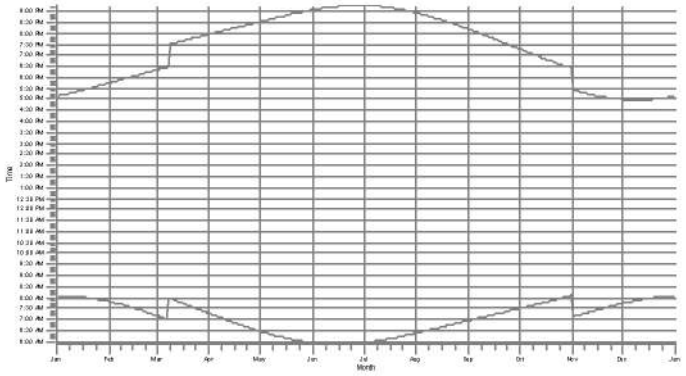
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

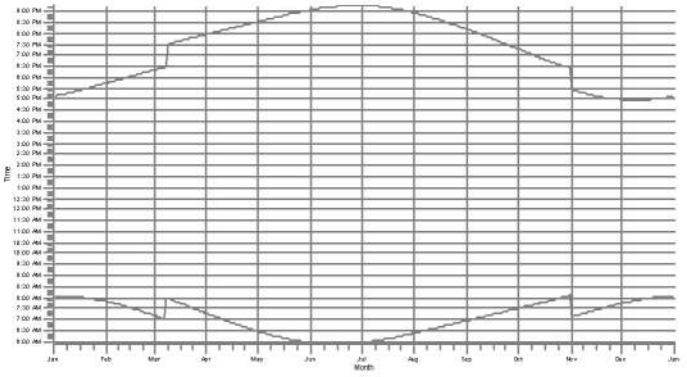
REC-085: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (85)



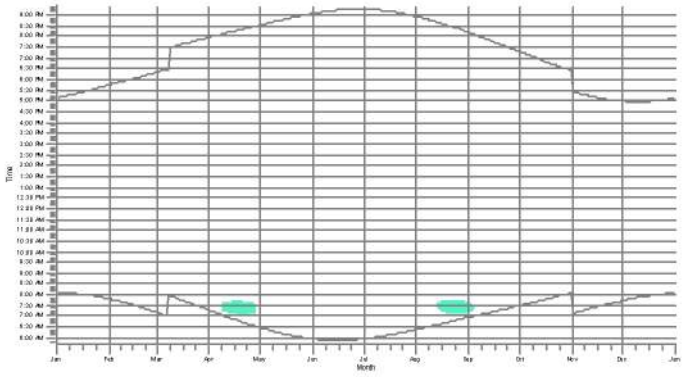
REC-086: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (86)



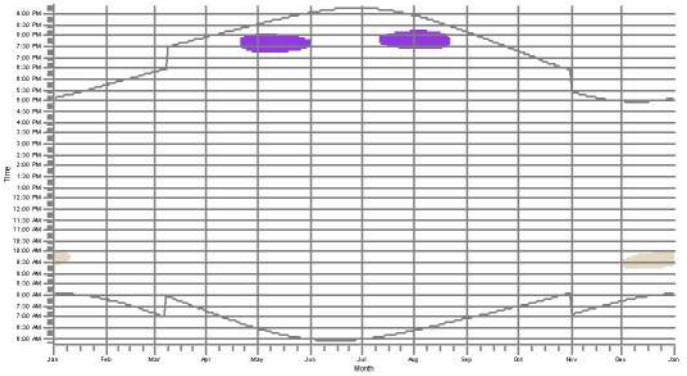
REC-087: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (87)



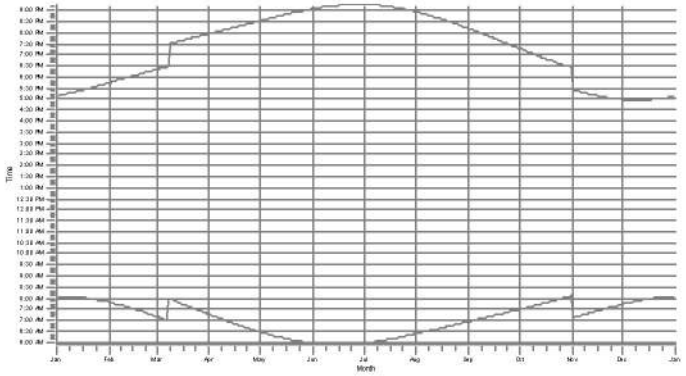
REC-088: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (88)



REC-089: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (89)



REC-090: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (90)



WTGs

4A.46: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (334)

4A.49: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (337)

4B.56: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (344)

Project:
sPower Shadow Flicker

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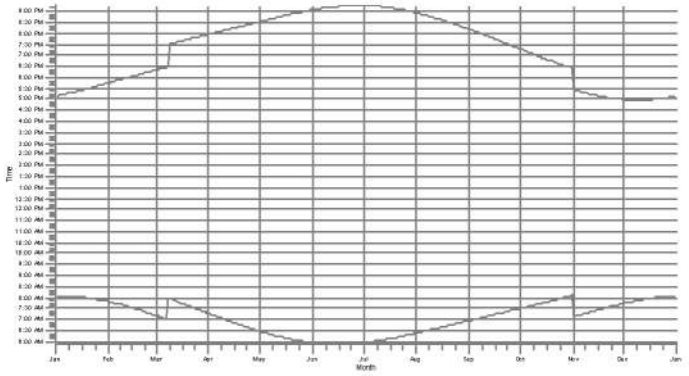
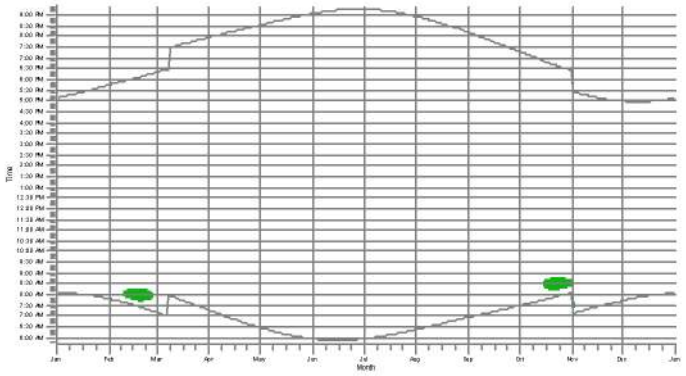
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

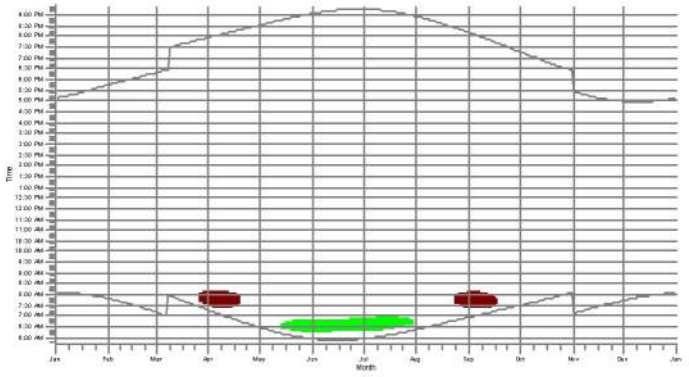
REC-091: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (91)



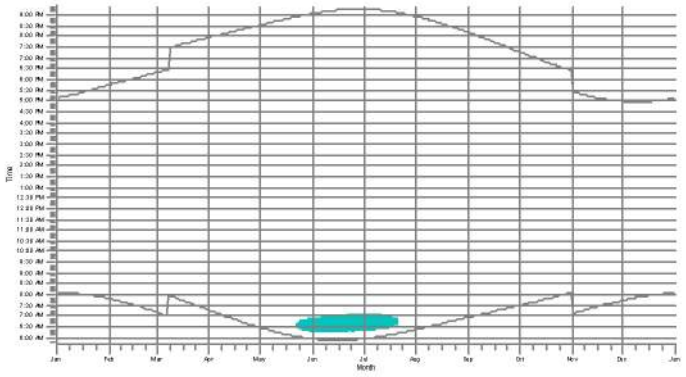
REC-092: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (92)



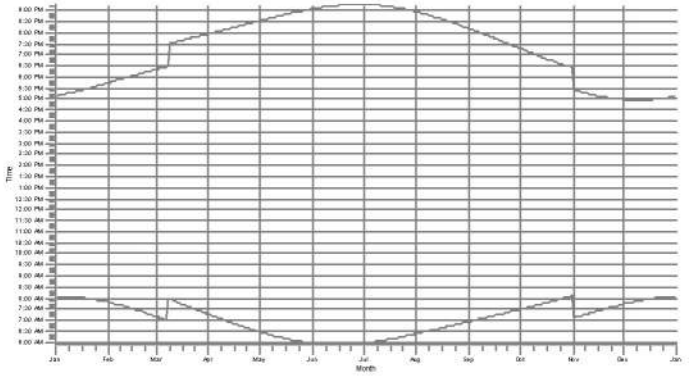
REC-093: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (93)



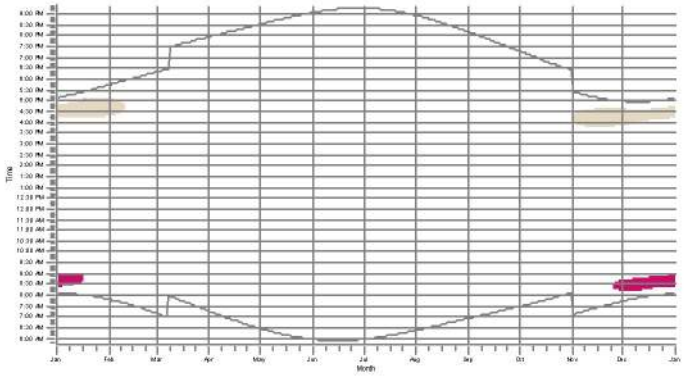
REC-094: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (94)



REC-095: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (95)



REC-096: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (96)



WTGs

18.08: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (296)
18.09: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (297)
2A.21: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (309)
4A.47: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (335)
4A.49: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (337)
48.50: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (338)
48.54: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (342)

Project:
sPower Shadow Flicker

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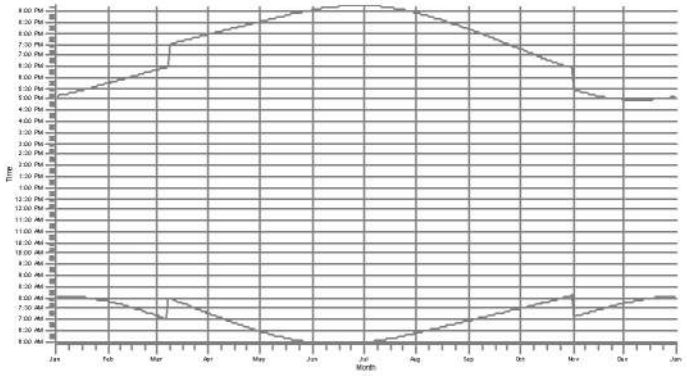
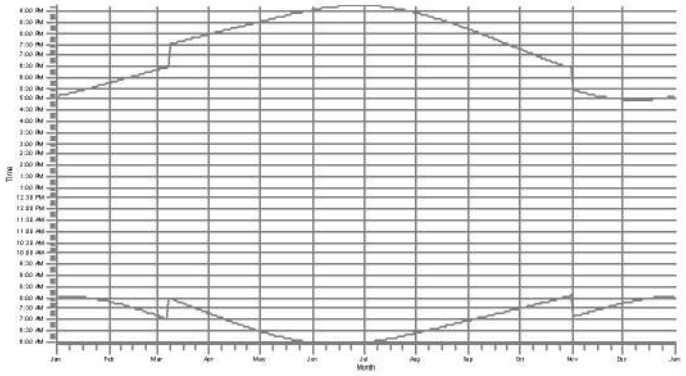
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

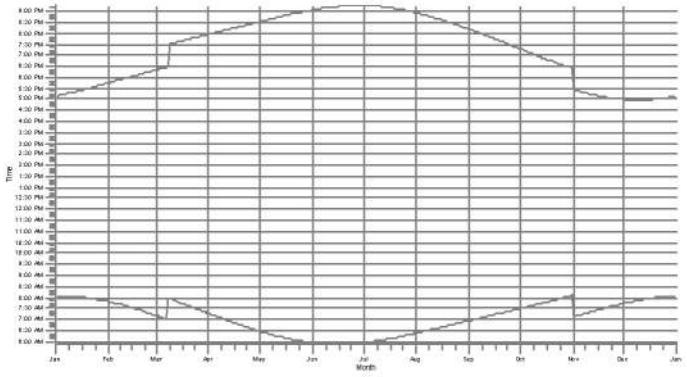
REC-097: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (97)



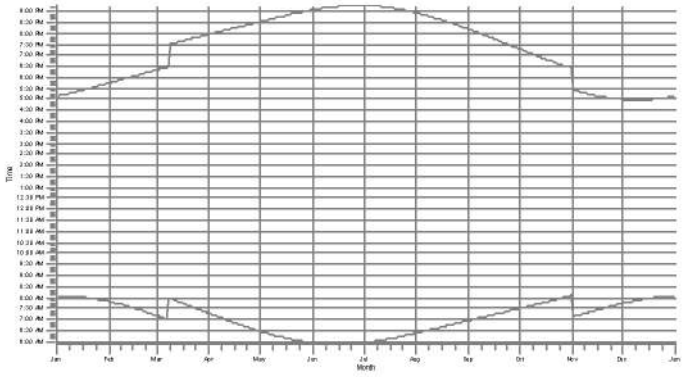
REC-098: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (98)



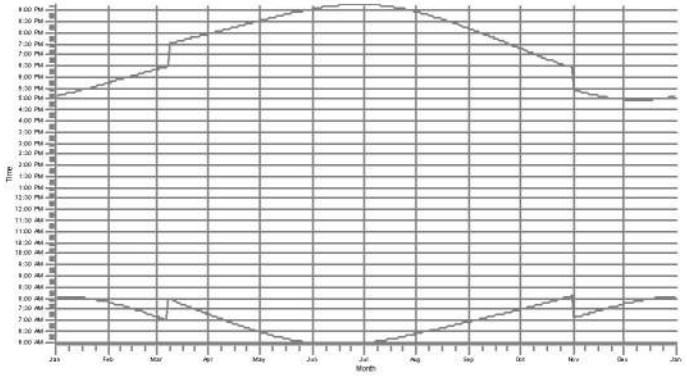
REC-099: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (99)



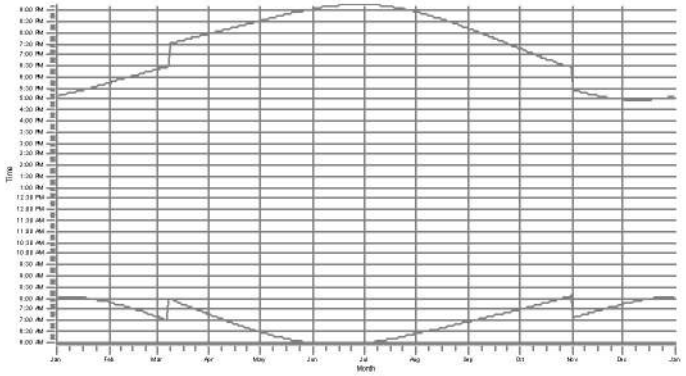
REC-100: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (100)



REC-101: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (101)



REC-102: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (102)



WTGs

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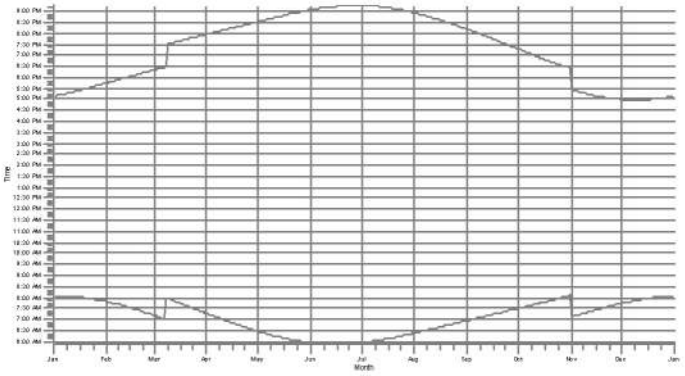
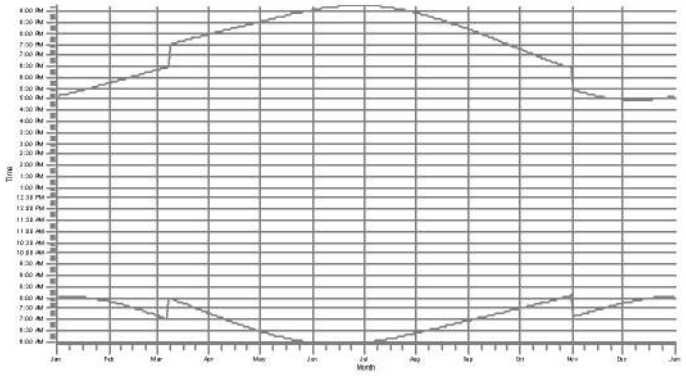
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

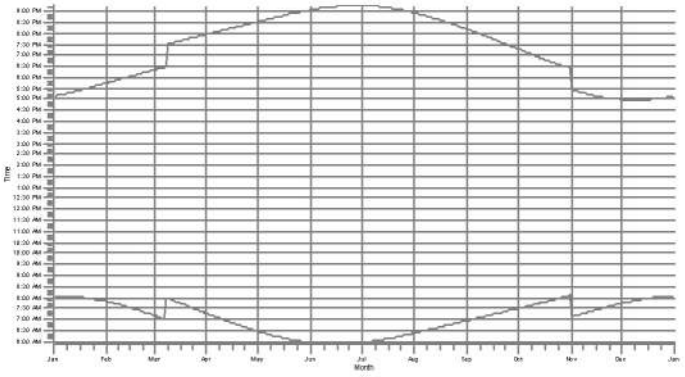
REC-103: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (103)



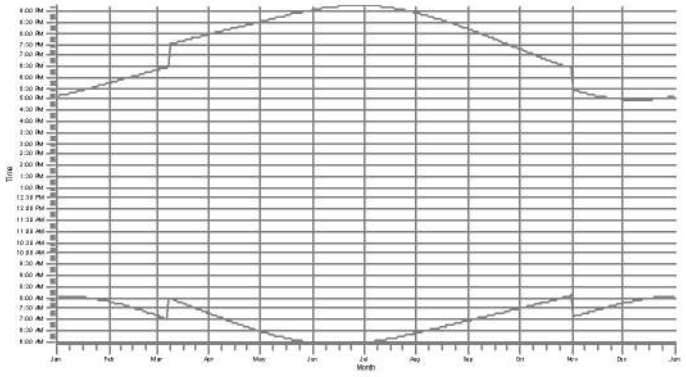
REC-104: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (104)



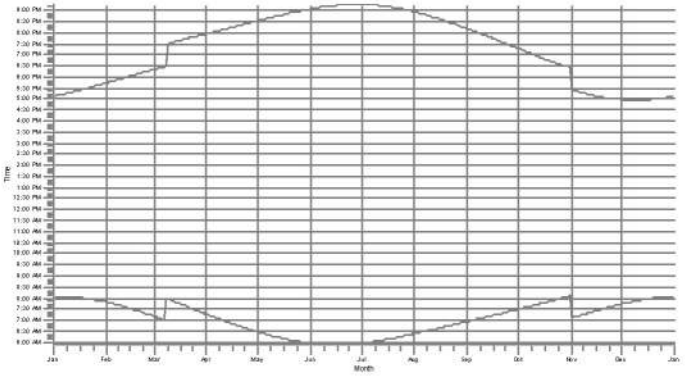
REC-105: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (105)



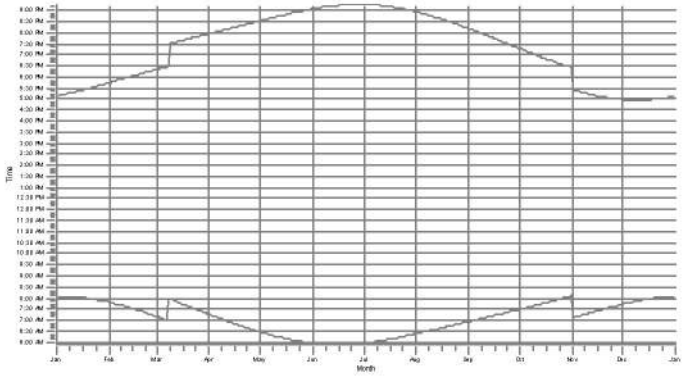
REC-106: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (106)



REC-107: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (107)



REC-108: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (108)



WTGs

Project:
sPower Shadow Flicker

Description:
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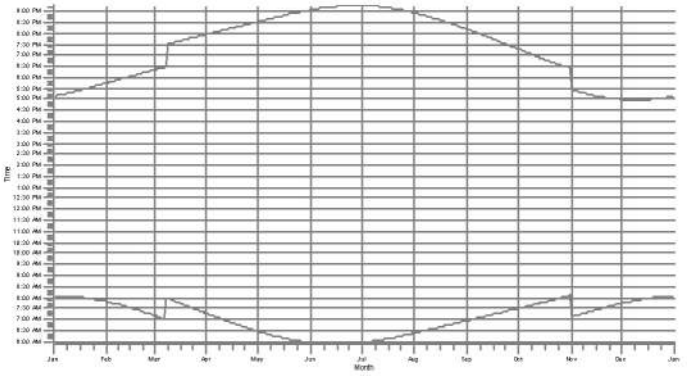
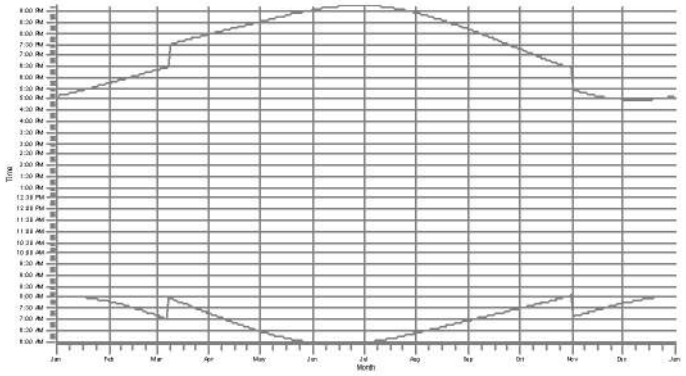
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

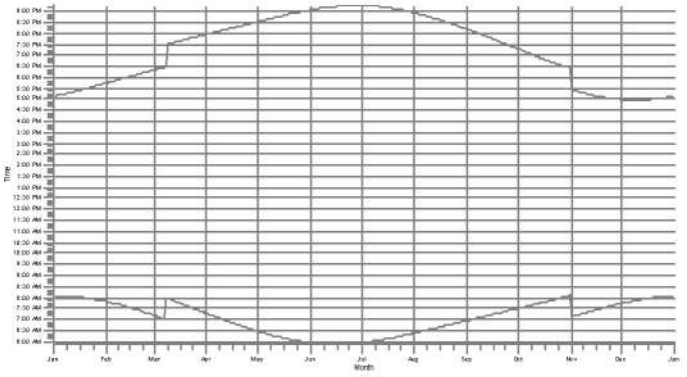
REC-109: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (109)



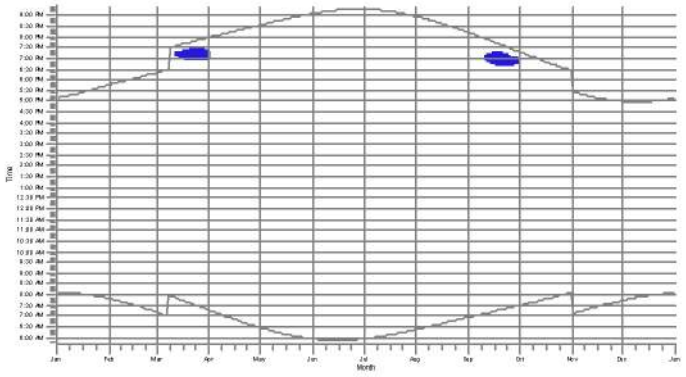
REC-110: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (110)



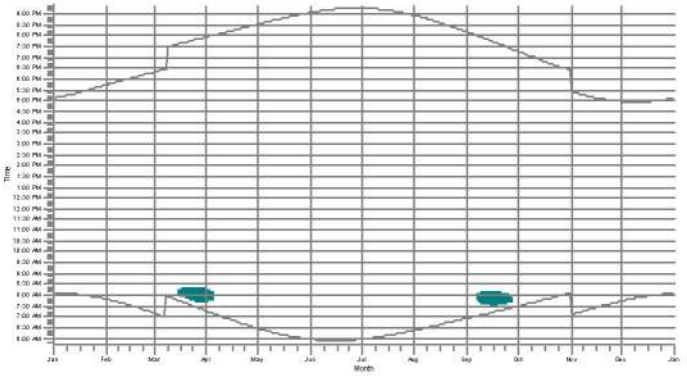
REC-111: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (111)



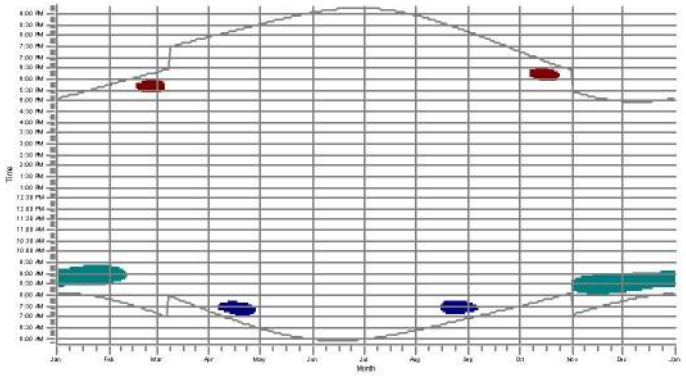
REC-112: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (112)



REC-113: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (113)



REC-114: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (114)



WTGs

1A.06: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (294)
1A.07: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (295)
1B.08: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (296)
3A.36: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (324)

Project:
sPower Shadow Flicker

Description:
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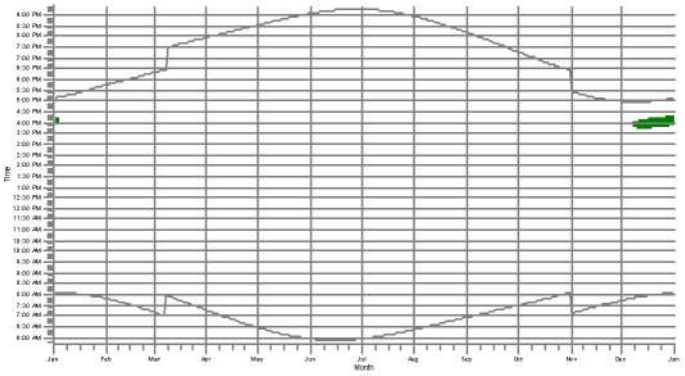
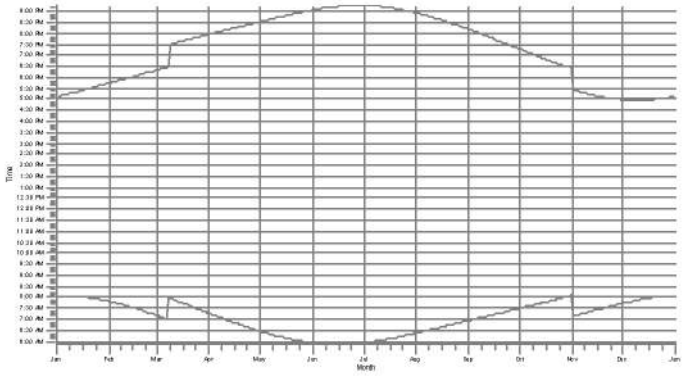
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

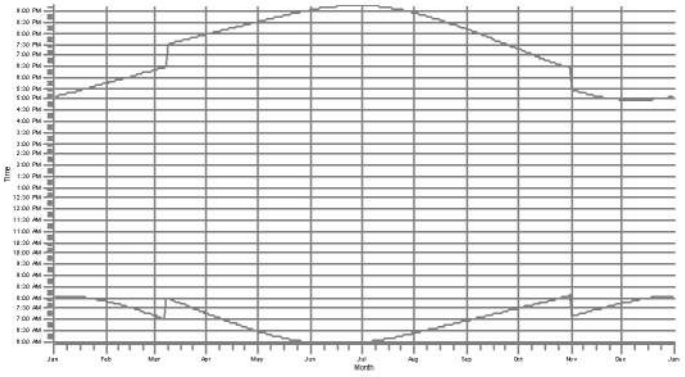
REC-115: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (115)



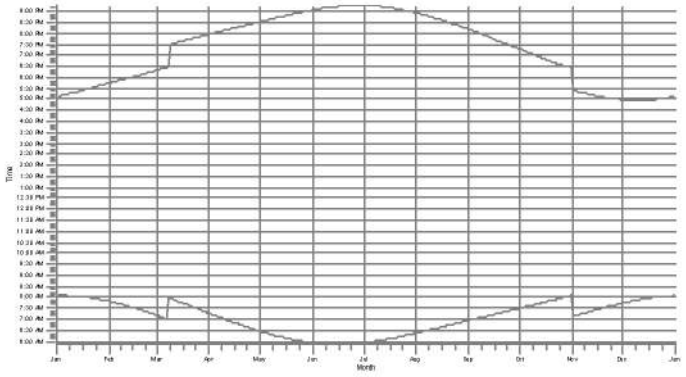
REC-116: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (116)



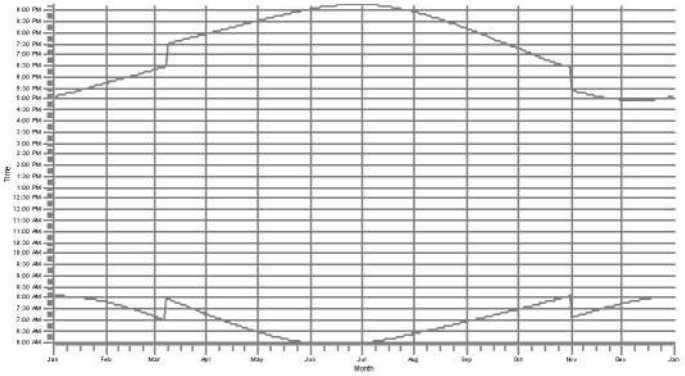
REC-117: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (117)



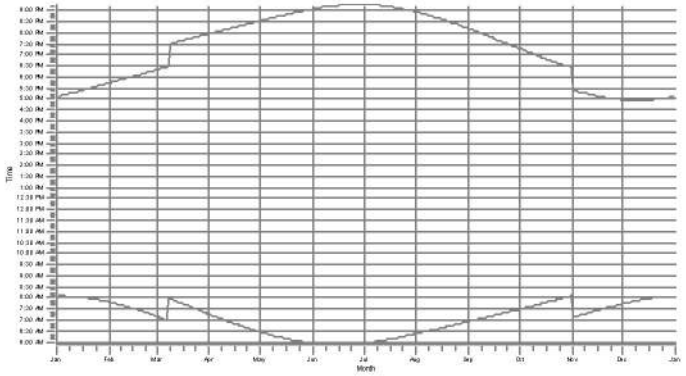
REC-118: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (118)



REC-119: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (119)



REC-120: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (120)



WTGs

1A.01: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (289)

Project:
sPower Shadow Flicker

Description:
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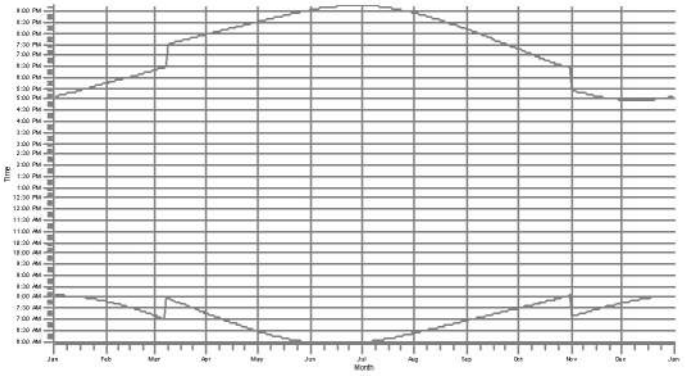
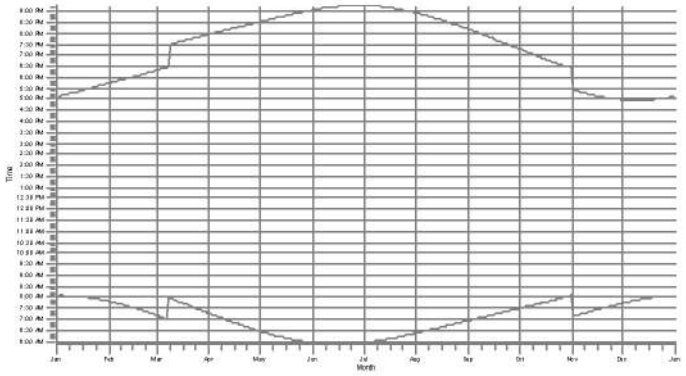
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

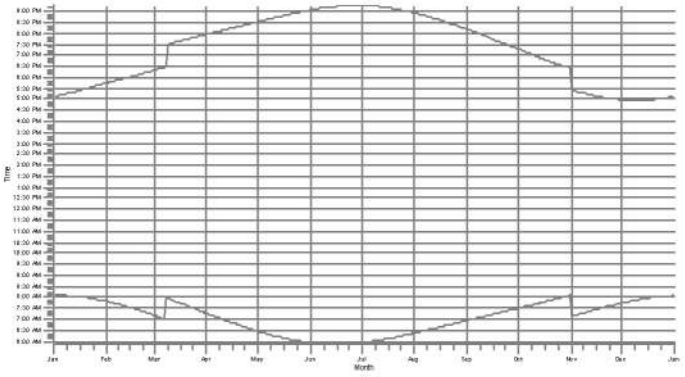
REC-121: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (121)



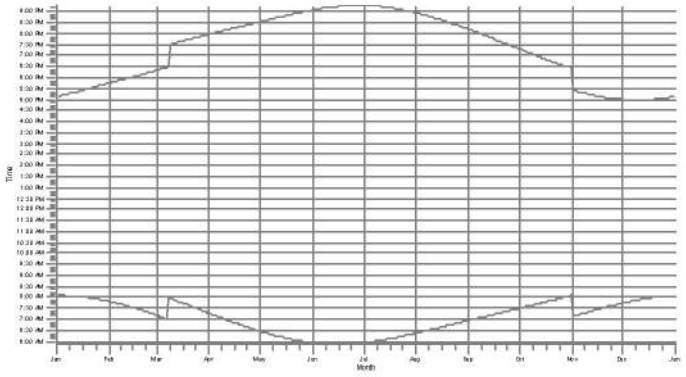
REC-122: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (122)



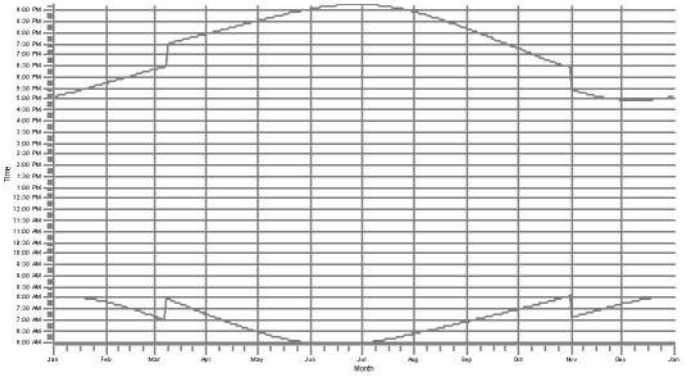
REC-123: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (123)



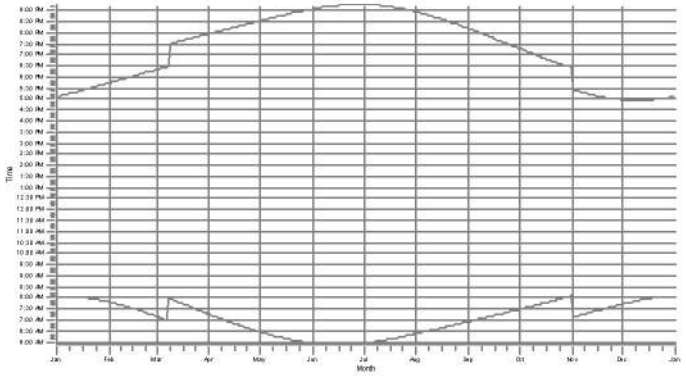
REC-124: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (124)



REC-125: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (125)



REC-126: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (126)



WTGs

Project:
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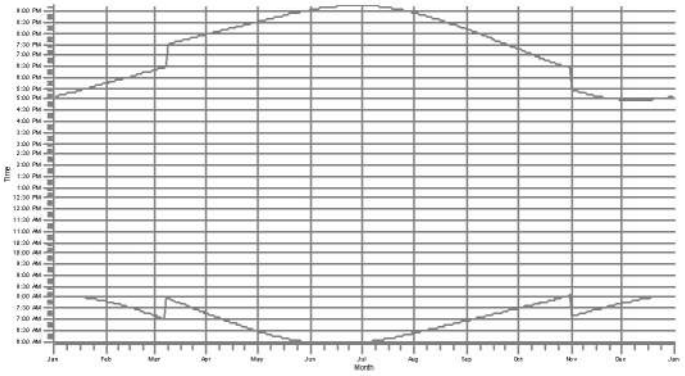
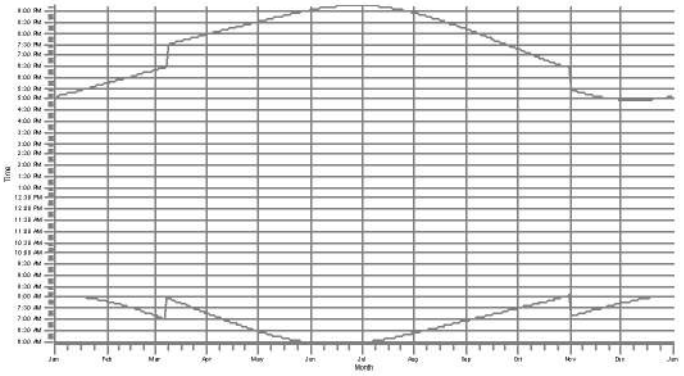
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

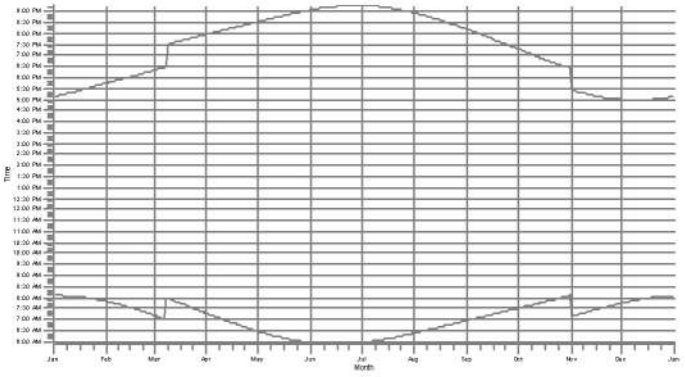
REC-127: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (127)



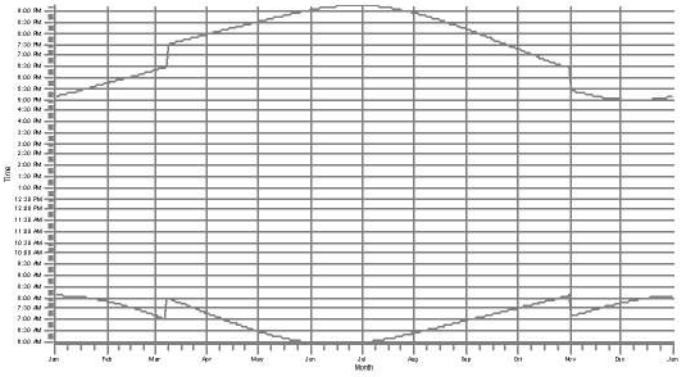
REC-128: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (128)



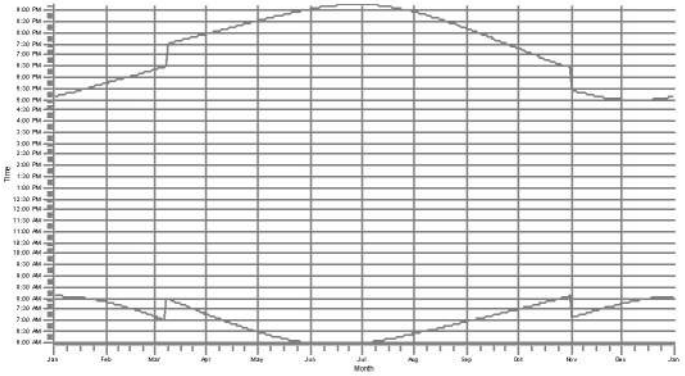
REC-129: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (129)



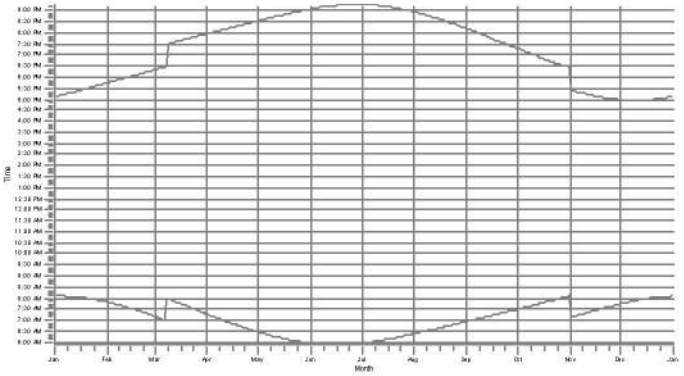
REC-130: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (130)



REC-131: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (131)



REC-132: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (132)



WTGs

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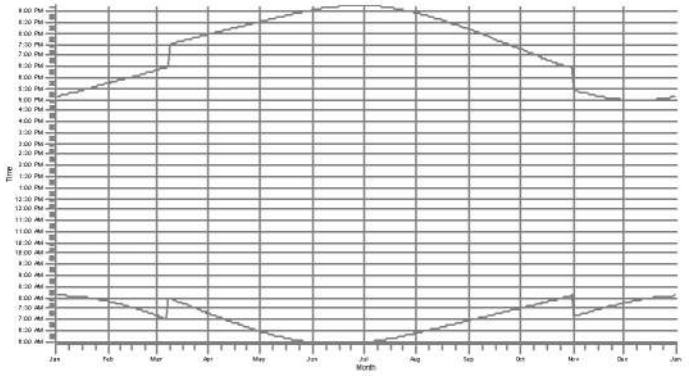
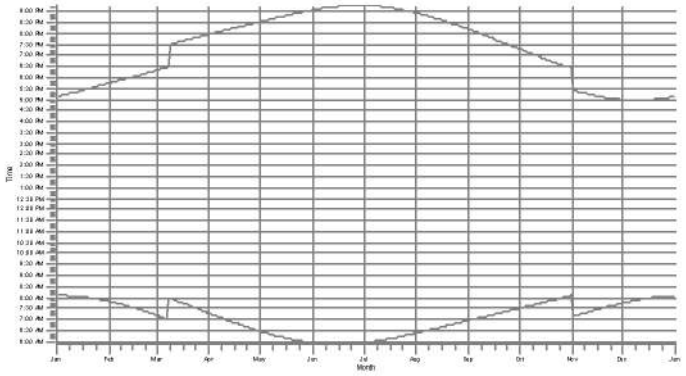
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

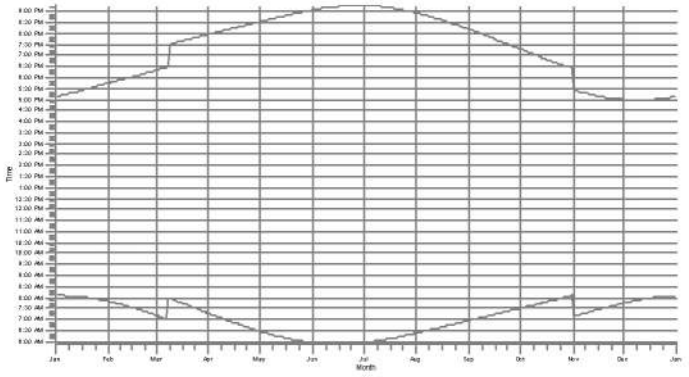
REC-133: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (133)



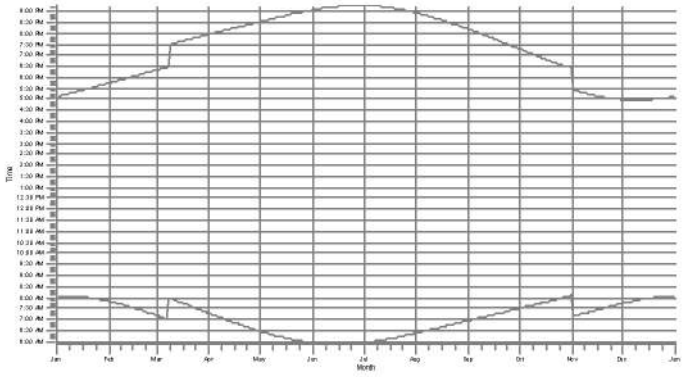
REC-134: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (134)



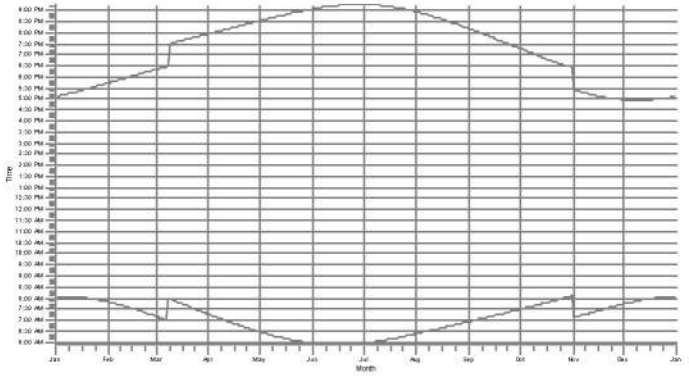
REC-135: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (135)



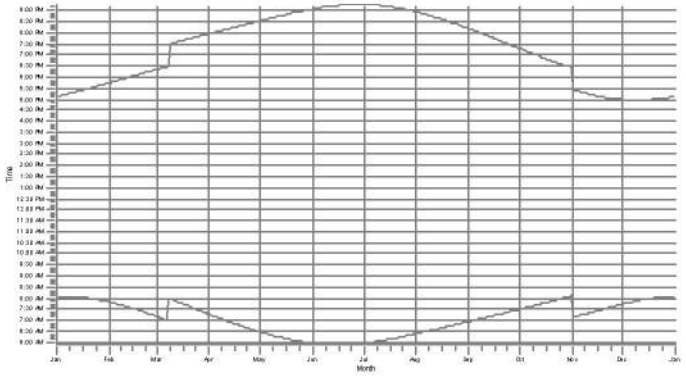
REC-136: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (136)



REC-137: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (137)



REC-138: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (138)



WTGs

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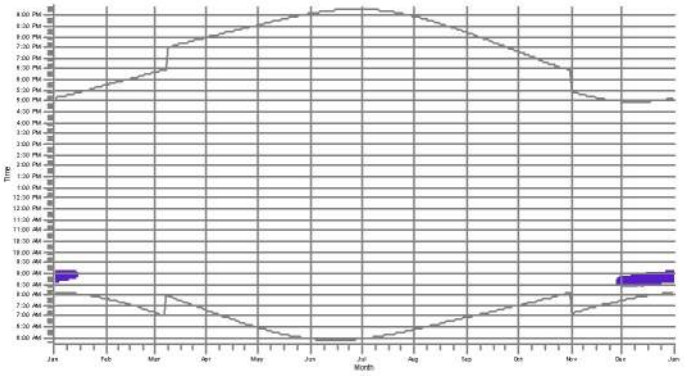
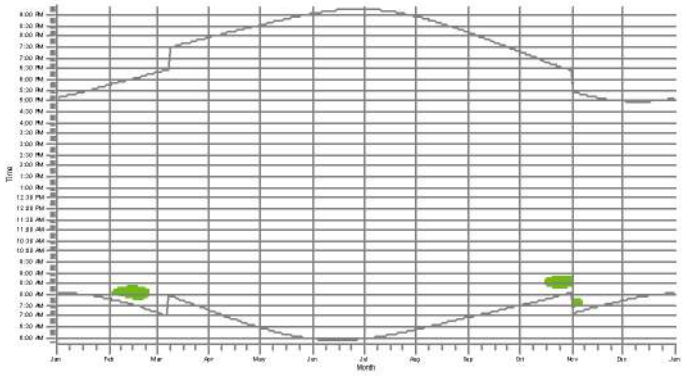
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

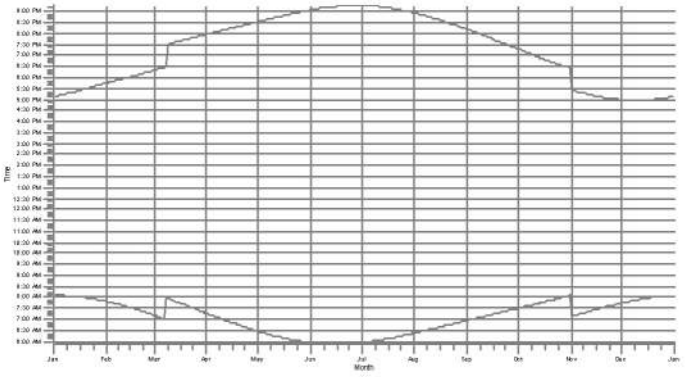
REC-139: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (139)



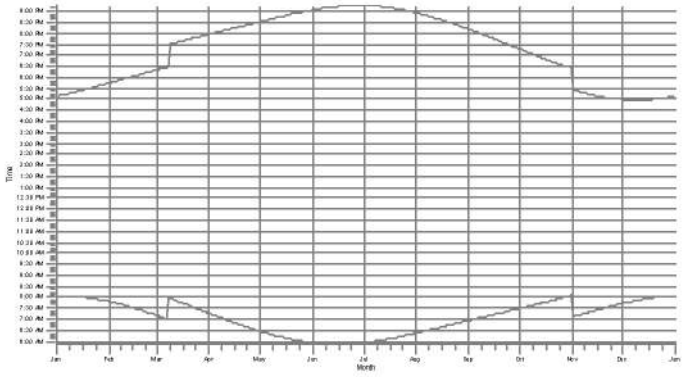
REC-140: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (140)



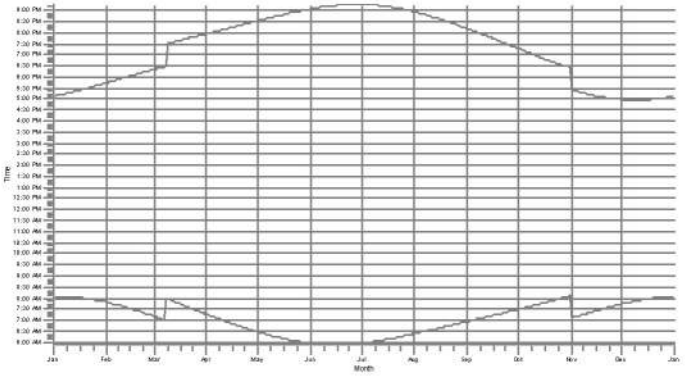
REC-141: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (141)



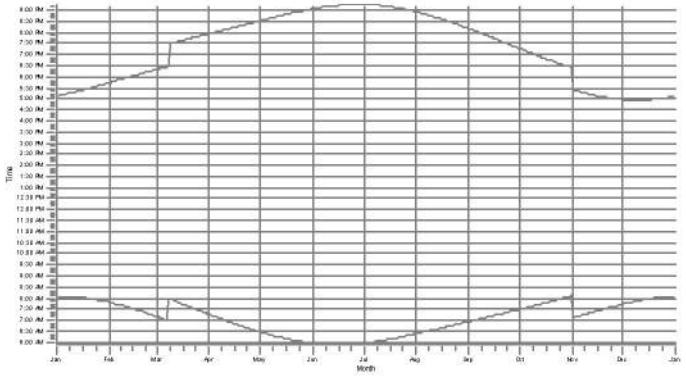
REC-142: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (142)



REC-143: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (143)



REC-144: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (144)



WTGs

38.42: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (330)

48.52: GE WIND ENERGY GE 3.8-137 3830 137.0 IO! hub: 111.5 m (TOT: 180.0 m) (340)

Project:
sPower Shadow Flicker

Description:
Burns & McDonnell has relied upon information provided by third-party sources to complete this study. While there is no reason to believe that the information provided is inaccurate or incomplete in any material respect, Burns & McDonnell has not independently verified such information and cannot guarantee or warranty its accuracy or completeness.

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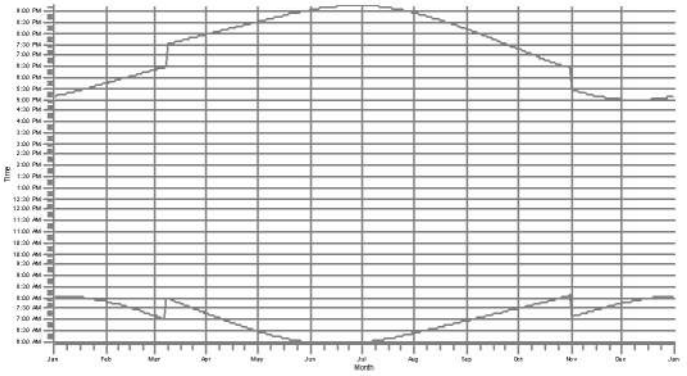
Calculated:
10/3/2018 3:53 PM/3.0.654

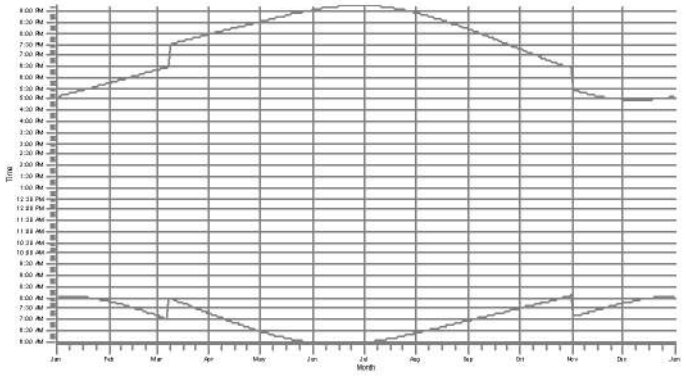
SHADOW - Calendar, graphical

Calculation: Results.v6.62xGE3.8_wObstacles_noMap

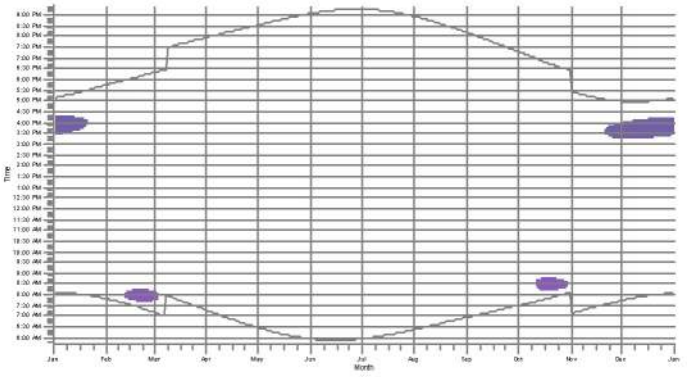
REC-145: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (145)



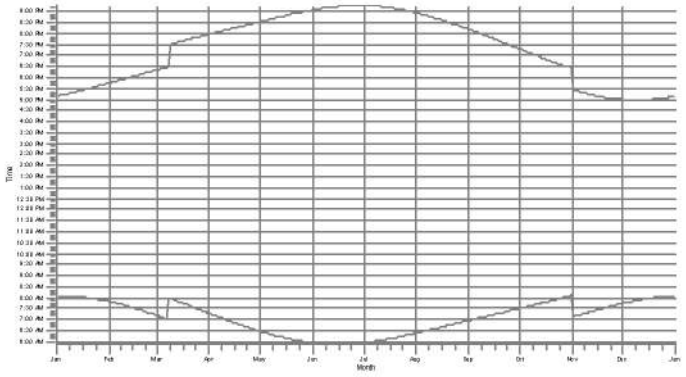
REC-146: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (146)



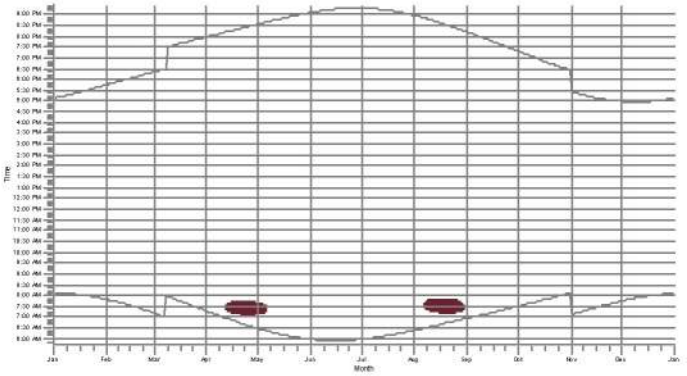
REC-147: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (147)



REC-148: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (148)



REC-149: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (149)



WTGs

3A.32: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (320)
4A.44: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (332)
4A.45: GE WIND ENERGY GE 3.8-137 3830 137.0 IOI hub: 111.5 m (TOT: 180.0 m) (333)

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CREATE AMAZING.

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