

Attachment A

Wind Rose and Sunshine Data

Table A1. Wind Rose Data

SECTOR	N	NNE	NE	ENE	E	ESE	SE	SSE
Frequency	2.40	1.64	2.79	2.58	2.52	2.26	4.43	5.20
Hours of Operation	210	144	244	226	221	198	388	456

SECTOR	S	SSW	SW	WSW	W	WNW	NW	NNW
Frequency	9.68	9.31	10.83	10.62	14.33	13.26	6.19	1.95
Hours of Operation	848	816	949	930	1,255	1,162	542	171

Source: Wind rose data provided by Baron Winds LLC

Table A2. Sunshine Probability Data¹

Month	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
Sunshine Probability ²	0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.61	0.53	0.45	0.29	0.28

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

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

Attachment B

WindPRO Overview Reports and Calendars

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Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Main Result

Assumptions for shadow calculations

Maximum distance for influence 1,400 m
Minimum sun height over horizon for influence 3 °
Day step for calculation 1 days
Time step for calculation 1 minutes

Sunshine probability S/S0 (Sun hours/Possible sun hours) []
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time
N NNE NE ENE E ESE SE SSE S SSW SW WSW
210 144 244 226 221 198 388 456 848 816 949 930
W WNW NW NNW Sum
1,255 1,162 542 171 8,760

Idle start wind speed: Cut in wind speed from power curve

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
Height contours used: Height Contours: 5m.wpo (1)
Obstacles not used in calculation
Eye height: 1.5 m
Grid resolution: 10.0 m

WTGs

UTM (north)-NAD83 (US+CA) Zone: 18				WTG type															
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM [RPM]									
		[m]																	
T1	293,385	4,704,954	623.3	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T11	293,220	4,705,806	585.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T13	292,875	4,708,883	560.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T14	290,558	4,705,677	640.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T15	293,886	4,705,881	552.3	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T17	292,090	4,706,618	594.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T18	292,501	4,709,210	562.5	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T19	294,440	4,704,487	575.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T2	291,467	4,708,702	625.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T21	290,510	4,706,469	635.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T22	292,106	4,705,504	622.4	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T24	290,466	4,707,129	625.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T26	291,811	4,705,001	644.2	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T28	290,504	4,706,080	633.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T29	291,031	4,707,172	613.6	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T3	290,340	4,709,450	626.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T32	285,852	4,696,318	585.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T33	290,518	4,706,806	624.5	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T34	291,309	4,705,076	645.3	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T35	285,767	4,700,800	617.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T37	291,344	4,705,863	630.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T38	286,267	4,694,588	551.3	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T4	293,513	4,706,210	572.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T40	285,835	4,700,423	602.9	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T42	286,264	4,695,782	574.4	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T43	294,381	4,704,830	554.5	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T44	290,797	4,703,668	625.0	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								
T45	286,743	4,698,591	593.6	SENVION 3.4M140 3700 140.0 !O!	hub: 80.0 m (... Yes	SENVION	3.4M140-3,700	3,700	140.0	80.0	0.0								

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SHADOW - Main Result

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	UTM (north)-NAD83 (US+CA) Zone: 18			Row data/Description	WTG type			Power, rated [kW]	Rotor diameter [m]	Hub height [m]	RPM [RPM]
	East	North	Z		Valid	Manufact.	Type-generator				
			[m]								
T46	289,513	4,703,835	595.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T47	291,055	4,703,384	627.6	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T49	291,097	4,705,349	640.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T5	290,662	4,709,248	637.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T50	287,191	4,695,159	570.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T51	287,700	4,695,141	580.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T52	292,510	4,703,551	572.9	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T53	289,537	4,702,238	614.1	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T55	289,380	4,702,469	612.9	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T59	290,801	4,704,000	625.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T6	291,665	4,706,293	635.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T60	293,080	4,703,592	553.4	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T61	286,672	4,701,775	615.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T62	287,363	4,701,344	604.8	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T63	286,519	4,697,062	587.2	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T64	288,701	4,700,621	574.6	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T65	287,492	4,698,481	590.7	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T66	287,968	4,701,243	605.9	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T67	289,226	4,696,642	601.8	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T68	288,142	4,699,593	585.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T69	287,998	4,698,597	586.8	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T7	292,057	4,708,884	599.1	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T70	286,790	4,696,419	583.9	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T71	286,635	4,696,713	588.7	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T72	286,712	4,702,099	614.3	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T73	288,317	4,697,105	610.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T74	290,773	4,704,333	615.5	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T75	288,751	4,700,931	592.8	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T76	287,783	4,699,794	590.6	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T77	288,116	4,697,587	598.3	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T78	288,760	4,701,354	595.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T79	287,041	4,700,040	586.3	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T8	294,285	4,704,177	570.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T80	287,569	4,696,468	594.3	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T81	287,725	4,702,933	590.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T82	287,830	4,696,826	600.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T83	287,069	4,702,510	600.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T84	287,677	4,695,444	579.1	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T85	287,760	4,697,114	602.2	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T86	287,779	4,702,624	590.2	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T87	287,150	4,699,722	578.8	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T88	289,617	4,704,183	570.1	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T89	287,646	4,701,859	605.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T9	292,978	4,704,672	615.0	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T90	287,175	4,696,816	586.5	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T91	287,908	4,701,572	607.7	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T92	288,559	4,696,697	587.6	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0
T93	288,741	4,697,536	588.4	SENVION 3.4M140 3700 140.0 IO!	hub: 80.0 m (...	Yes	SENVION 3.4M140-3,700	3,700	140.0	80.0	0.0

Project:

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217 Montgomery St.
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(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Main Result

Shadow receptor-Input

UTM (north)-NAD83 (US+CA) Zone: 18

No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
	[m]	[m]	[m]	[m]	[m]	[m]	[°]	[°]	
400	288,759	4,704,206	525.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
401	288,780	4,704,205	524.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
403	288,722	4,704,311	541.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
405	288,935	4,704,528	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
406	288,972	4,704,510	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
407	288,897	4,704,451	520.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
408	288,868	4,704,549	530.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
413	288,986	4,704,764	529.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
415	289,268	4,704,653	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
419	289,340	4,704,743	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
425	290,211	4,704,346	538.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
426	289,943	4,703,617	550.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
427	290,015	4,703,562	550.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
429	288,714	4,704,042	525.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
430	288,605	4,703,830	520.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
433	288,536	4,703,730	520.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
435	287,657	4,703,495	542.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
436	287,567	4,703,488	546.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
437	287,426	4,703,433	550.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
438	287,065	4,704,123	615.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
439	287,010	4,704,111	620.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
444	287,112	4,703,627	589.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
446	287,183	4,703,381	562.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
484	288,522	4,704,979	610.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
541	286,578	4,701,238	616.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
542	286,830	4,701,209	595.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
544	286,801	4,701,291	597.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
547	288,112	4,700,800	565.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
549	287,529	4,700,556	546.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
556	287,175	4,700,786	547.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
559	287,054	4,700,814	555.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
561	286,680	4,700,521	553.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
564	286,613	4,700,479	553.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
569	285,386	4,700,515	596.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
570	285,382	4,700,252	576.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
572	285,972	4,699,870	549.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
574	286,432	4,699,895	550.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
575	286,588	4,699,777	570.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
576	286,547	4,700,426	552.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
578	286,477	4,700,403	554.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
583	286,541	4,700,158	547.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
584	288,042	4,700,353	524.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
585	287,917	4,700,282	539.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
586	288,064	4,700,215	520.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
587	287,997	4,700,210	531.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
589	288,113	4,700,192	518.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
590	288,196	4,700,364	510.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
592	288,527	4,699,870	509.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
593	288,981	4,700,199	504.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
594	288,807	4,699,938	494.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
595	288,919	4,700,053	494.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
596	288,934	4,700,081	496.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
597	288,959	4,700,130	498.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
598	288,959	4,699,937	496.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

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SHADOW - Main Result

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UTM (north)-NAD83 (US+CA) Zone: 18

No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
599	289,002	4,699,954	497.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
600	288,927	4,699,932	495.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
601	288,878	4,699,830	498.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
604	288,887	4,699,351	516.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
607	288,367	4,699,134	541.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
609	288,254	4,699,120	548.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
615	285,942	4,703,250	627.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
620	286,290	4,703,321	620.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
621	286,616	4,702,774	597.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
622	286,571	4,703,084	602.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
624	288,085	4,703,359	528.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
625	288,217	4,703,353	523.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
629	288,306	4,703,326	523.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
633	288,397	4,703,201	516.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
648	288,330	4,702,910	515.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
649	288,414	4,703,092	514.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
650	288,451	4,702,799	512.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
651	288,895	4,702,960	585.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
654	288,994	4,703,044	596.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
655	289,066	4,702,948	600.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
656	289,065	4,703,117	600.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
659	289,346	4,702,930	610.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
660	289,840	4,702,927	581.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
664	289,735	4,702,765	593.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
666	289,873	4,703,293	563.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
667	289,939	4,703,401	560.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
670	290,414	4,702,906	590.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
675	289,868	4,703,126	569.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
677	290,796	4,702,901	621.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
679	291,183	4,702,888	610.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
684	291,457	4,702,760	601.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
687	286,482	4,699,539	542.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
690	286,981	4,699,130	597.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
691	286,897	4,699,050	597.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
694	287,250	4,699,027	604.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
696	286,343	4,699,546	545.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
697	286,400	4,699,704	552.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
699	285,678	4,699,702	550.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
706	290,916	4,710,239	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
707	291,132	4,710,215	510.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
710	291,432	4,709,958	484.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
713	290,795	4,710,235	532.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
714	290,569	4,710,185	547.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
719	290,095	4,710,182	565.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
722	290,190	4,710,072	562.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
736	289,138	4,709,602	551.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
737	289,115	4,709,527	537.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
738	289,258	4,709,368	538.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
742	289,120	4,708,953	530.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
743	289,211	4,709,125	535.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
744	289,073	4,709,118	532.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
748	289,107	4,708,991	530.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
750	289,104	4,709,019	530.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
753	289,418	4,709,473	540.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

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SHADOW - Main Result

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UTM (north)-NAD83 (US+CA) Zone: 18

No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
756	289,344	4,709,383	541.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
757	289,664	4,709,567	555.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
764	291,594	4,702,944	595.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
766	291,782	4,702,851	578.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
767	291,870	4,702,901	561.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
768	291,805	4,703,121	595.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
769	291,741	4,703,257	589.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
770	291,783	4,703,247	588.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
771	292,211	4,702,838	560.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
772	292,397	4,702,792	569.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
773	292,534	4,702,870	559.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
774	292,896	4,702,756	546.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
776	293,070	4,702,788	547.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
777	292,899	4,702,832	536.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
778	293,021	4,703,023	490.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
780	293,436	4,703,097	488.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
783	293,509	4,703,122	488.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
784	293,138	4,702,854	536.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
786	293,334	4,702,891	530.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
789	293,713	4,702,956	526.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
795	293,543	4,702,734	545.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
801	290,301	4,702,495	610.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
802	290,326	4,702,372	607.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
806	288,452	4,702,199	509.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
807	288,518	4,702,127	513.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
810	288,785	4,701,977	514.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
811	288,082	4,702,259	583.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
813	285,270	4,702,078	582.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
832	284,949	4,701,880	519.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
833	286,020	4,701,644	623.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
835	285,813	4,701,591	622.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
836	286,225	4,701,634	618.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
837	286,351	4,701,714	609.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
838	289,338	4,708,968	550.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
839	289,412	4,708,951	558.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
840	289,428	4,708,977	559.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
842	289,730	4,709,022	585.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
843	289,684	4,709,015	580.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
846	290,032	4,708,985	610.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
848	290,278	4,708,984	631.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
849	290,187	4,708,989	625.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
851	291,083	4,709,050	605.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
856	291,780	4,709,379	530.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
873	289,428	4,707,507	521.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
874	289,406	4,707,468	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
875	289,389	4,707,600	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
876	289,411	4,707,674	520.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
877	289,436	4,707,852	525.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
878	289,435	4,707,888	526.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
879	289,395	4,707,999	525.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
880	289,397	4,707,861	520.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
881	289,401	4,707,778	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
882	289,410	4,707,719	520.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
883	289,404	4,707,420	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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US-SYRACUSE, NY 13202
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SHADOW - Main Result

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UTM (north)-NAD83 (US+CA) Zone: 18

No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
884	289,435	4,707,994	534.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
885	290,360	4,707,666	552.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
886	290,253	4,707,590	563.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
887	290,195	4,707,587	565.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
888	291,195	4,707,638	511.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
892	291,457	4,707,751	483.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
893	291,422	4,707,694	488.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
894	291,357	4,707,768	485.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
902	291,967	4,707,990	468.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
903	292,182	4,707,822	468.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
907	291,770	4,707,027	481.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
909	292,165	4,707,107	468.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
912	290,055	4,707,342	603.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
915	289,537	4,707,245	540.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
916	289,440	4,706,903	523.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
917	289,337	4,706,726	522.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
918	289,379	4,707,008	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
919	289,389	4,706,980	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
920	289,374	4,707,133	522.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
921	289,411	4,707,175	525.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
922	289,386	4,707,388	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
923	289,328	4,707,303	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
924	289,316	4,707,372	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
925	289,321	4,707,232	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
926	289,319	4,707,129	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
927	289,341	4,706,846	520.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
928	289,604	4,707,288	546.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
936	289,433	4,706,547	537.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
937	289,283	4,706,529	523.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
938	289,307	4,706,617	523.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
939	289,247	4,706,456	522.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
951	289,193	4,707,017	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
952	289,139	4,707,020	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
953	289,086	4,707,028	520.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
966	292,464	4,706,203	465.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
967	292,329	4,706,095	473.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
968	292,316	4,706,082	475.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
969	289,527	4,705,900	535.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
977	292,459	4,704,839	549.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
979	292,575	4,705,098	514.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
981	292,278	4,704,400	577.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
984	290,787	4,704,807	597.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
986	290,329	4,704,906	560.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
989	290,655	4,704,984	606.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
990	289,879	4,704,995	540.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
991	292,079	4,703,734	523.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2209	289,431	4,700,613	504.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2210	289,304	4,700,513	502.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2217	290,056	4,701,310	550.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2264	290,827	4,701,875	566.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2412	289,229	4,700,116	486.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2413	289,162	4,700,178	485.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2414	289,174	4,700,184	485.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2415	289,237	4,700,296	483.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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SHADOW - Main Result

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UTM (north)-NAD83 (US+CA) Zone: 18

No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
	[m]	[m]	[m]	[m]	[m]	[m]	[°]	[°]	
2421	289,188	4,700,045	501.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2424	288,878	4,699,872	497.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2425	288,829	4,699,875	497.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2426	288,888	4,699,908	495.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2431	288,924	4,699,818	500.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2432	289,494	4,699,585	485.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2433	289,402	4,699,680	485.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2447	287,401	4,698,961	610.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2450	288,712	4,698,952	531.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2451	288,734	4,698,920	529.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2455	288,653	4,698,629	549.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2456	288,489	4,698,962	544.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2458	288,900	4,699,014	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2459	288,912	4,698,945	505.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2592	289,684	4,698,411	560.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2593	289,591	4,698,018	574.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2601	289,647	4,698,076	570.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2602	289,688	4,697,729	590.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2605	289,666	4,697,531	591.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2606	289,669	4,697,542	590.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2609	288,543	4,698,240	535.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2610	288,435	4,698,350	540.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2612	288,523	4,698,113	541.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2613	288,420	4,698,089	547.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2616	288,545	4,697,950	564.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2620	287,510	4,697,594	570.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2624	286,845	4,697,477	544.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2627	286,838	4,697,411	551.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2629	286,943	4,697,458	547.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2630	286,184	4,697,467	538.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2631	286,130	4,697,447	541.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2634	285,890	4,697,507	547.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2640	285,696	4,697,515	548.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2641	285,706	4,697,501	550.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2645	285,815	4,697,502	550.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2651	289,322	4,697,304	594.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2653	289,673	4,697,274	594.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2655	289,707	4,696,878	610.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2790	288,847	4,695,732	583.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2791	288,337	4,695,596	525.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2792	288,339	4,695,423	522.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2793	287,861	4,696,109	583.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2800	287,547	4,695,962	585.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2801	286,615	4,695,945	555.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2802	286,984	4,694,741	554.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2807	288,418	4,695,200	524.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2808	288,377	4,695,075	506.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2814	288,435	4,694,997	502.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2816	288,510	4,694,527	514.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2817	288,419	4,694,509	505.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2818	288,607	4,694,531	523.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2835	287,972	4,694,714	551.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
2836	287,964	4,694,661	547.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3035	288,243	4,694,027	467.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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SHADOW - Main Result

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UTM (north)-NAD83 (US+CA) Zone: 18

No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
3036	288,241	4,694,036	467.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3039	287,955	4,693,837	459.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3040	287,972	4,693,921	464.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3041	287,962	4,693,952	465.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3042	288,044	4,693,893	464.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3047	287,820	4,693,933	462.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3048	287,759	4,693,936	461.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3054	286,868	4,693,651	440.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3055	286,809	4,693,640	440.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3056	286,836	4,693,567	442.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3057	286,890	4,693,577	442.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3059	287,187	4,693,644	447.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3060	287,136	4,693,641	447.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3061	287,091	4,693,636	447.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3062	287,174	4,693,632	448.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3063	287,456	4,693,868	458.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3066	286,602	4,693,547	438.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3070	286,107	4,693,569	432.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3071	286,311	4,693,551	435.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3072	286,080	4,693,693	436.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3081	286,110	4,693,705	437.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3487	285,198	4,695,312	560.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3488	285,041	4,695,263	559.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3561	285,443	4,693,698	431.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3562	285,428	4,693,584	422.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3563	285,570	4,693,564	426.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3564	285,212	4,693,803	437.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3565	285,218	4,693,819	439.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3566	285,304	4,693,745	431.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3568	285,458	4,693,817	443.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3571	285,468	4,693,715	433.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3572	285,489	4,693,566	424.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3575	285,834	4,693,635	430.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3576	285,675	4,693,570	426.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3577	285,611	4,693,562	427.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3578	285,645	4,693,570	426.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3666	293,416	4,709,728	421.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3667	293,400	4,709,780	422.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3668	292,730	4,709,631	475.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3670	292,834	4,709,551	466.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3687	293,622	4,709,275	412.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3726	293,699	4,709,092	411.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3727	293,672	4,709,021	413.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3728	293,790	4,709,043	407.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3729	293,781	4,709,064	408.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3730	293,752	4,709,113	408.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3731	293,633	4,709,230	412.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3732	293,659	4,709,196	411.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3742	293,882	4,708,862	406.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3743	293,891	4,708,825	405.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3744	293,898	4,708,810	405.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3745	293,919	4,708,780	404.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3746	293,936	4,708,731	403.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3747	293,948	4,708,710	403.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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SHADOW - Main Result

...continued from previous page

UTM (north)-NAD83 (US+CA) Zone: 18

No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
3748	293,954	4,708,693	403.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3749	293,962	4,708,679	403.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3750	293,913	4,708,674	405.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3751	293,895	4,708,697	405.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3752	293,889	4,708,715	406.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3753	293,881	4,708,734	406.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3754	293,835	4,708,836	409.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3755	293,816	4,708,816	410.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3758	293,799	4,708,899	410.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3769	293,923	4,708,647	404.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3947	294,212	4,708,543	394.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3948	294,187	4,708,549	394.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3949	294,170	4,708,556	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3950	294,151	4,708,578	395.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3956	294,206	4,708,489	394.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3957	294,175	4,708,488	394.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3958	294,149	4,708,429	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3959	294,179	4,708,414	394.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3960	294,157	4,708,386	394.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
3961	294,135	4,708,395	395.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4010	293,216	4,707,980	442.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4015	292,734	4,707,981	450.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4016	292,777	4,707,978	451.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4017	292,702	4,707,979	452.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4018	292,357	4,707,880	467.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4021	292,664	4,707,442	448.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4025	293,512	4,707,443	430.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4048	293,615	4,706,755	420.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4049	293,344	4,706,776	436.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4050	293,445	4,706,973	430.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4051	293,415	4,706,821	430.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4052	293,400	4,706,807	431.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4053	293,372	4,706,725	431.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4054	293,222	4,706,665	439.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4056	293,318	4,706,830	441.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4057	293,295	4,706,837	445.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4058	292,775	4,706,326	447.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4059	294,629	4,706,241	399.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4083	292,794	4,705,547	504.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4084	292,697	4,705,255	510.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4085	292,680	4,705,343	498.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4086	295,386	4,704,944	396.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4087	295,384	4,704,918	395.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4088	295,396	4,704,824	404.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4099	295,731	4,704,004	401.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4102	295,708	4,704,063	401.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4106	293,891	4,703,778	478.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4107	294,170	4,703,482	440.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4108	294,299	4,703,243	452.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4109	294,819	4,703,502	425.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4110	294,569	4,703,405	430.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4114	294,665	4,703,377	419.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4164	293,028	4,710,317	435.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4165	293,109	4,710,355	440.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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Project:

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SHADOW - Main Result

...continued from previous page

UTM (north)-NAD83 (US+CA) Zone: 18

No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
	[m]	[m]	[m]	[m]	[m]	[m]	[°]	[°]	
4166	293,104	4,710,397	440.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4168	292,662	4,710,431	444.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4175	291,825	4,710,231	453.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4176	291,886	4,710,210	452.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4180	292,064	4,710,121	452.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4181	291,930	4,710,115	457.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4190	292,518	4,710,167	440.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4191	292,403	4,710,047	451.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4192	292,249	4,710,159	445.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4193	292,834	4,710,134	435.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4194	292,730	4,710,090	440.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4207	293,553	4,710,121	420.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4208	293,301	4,709,951	425.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4209	293,407	4,709,948	421.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4223	293,991	4,708,566	401.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4224	293,982	4,708,536	401.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4225	293,974	4,708,491	402.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4226	293,970	4,708,459	402.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4227	293,962	4,708,424	402.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4229	293,914	4,708,338	405.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4230	293,943	4,708,593	403.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4246	292,704	4,708,025	447.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4249	293,282	4,708,275	471.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4251	293,833	4,708,251	407.6	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4252	293,798	4,708,251	409.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4253	293,904	4,708,278	405.2	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4254	293,902	4,708,300	405.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4260	293,837	4,708,195	407.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4261	293,920	4,708,064	400.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4262	293,862	4,708,030	402.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4448	293,558	4,704,503	564.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4449	288,828	4,697,356	592.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4450	289,876	4,709,010	592.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4451	289,140	4,709,060	530.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4452	291,162	4,710,129	505.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4462	293,407	4,707,060	439.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4463	293,424	4,706,868	430.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4464	293,094	4,706,695	443.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4465	289,662	4,705,316	527.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4468	292,756	4,705,897	473.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4470	293,435	4,704,541	578.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4471	293,694	4,704,578	570.9	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4472	295,409	4,704,739	408.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4473	292,220	4,704,299	582.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4475	295,112	4,703,843	446.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4476	285,695	4,701,707	617.4	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4478	289,611	4,702,931	603.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4483	289,379	4,700,419	485.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4490	288,902	4,700,024	491.8	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4491	288,916	4,699,958	492.3	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4494	286,402	4,699,466	535.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4495	286,377	4,699,317	526.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4498	288,680	4,699,055	525.0	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4499	289,684	4,698,551	558.5	1.0	1.0	1.0	0.0	90.0	"Green house mode"

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Project:

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SHADOW - Main Result

...continued from previous page

UTM (north)-NAD83 (US+CA) Zone: 18

No.	East	North	Z	Width	Height	Height a.g.l.	Degrees from south cw	Slope of window	Direction mode
			[m]	[m]	[m]	[m]	[°]	[°]	
4504	285,744	4,697,510	550.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4505	286,624	4,697,449	558.7	1.0	1.0	1.0	0.0	90.0	"Green house mode"
4506	288,576	4,698,346	535.1	1.0	1.0	1.0	0.0	90.0	"Green house mode"

Calculation Results

Shadow receptor

No.	Shadow, worst case		Max shadow hours per day	Shadow, expected values
	Shadow hours per year [h/year]	Shadow days per year [days/year]		Shadow hours per year [h/year]
400	50:31	102	0:39	15:55
401	53:10	105	0:40	16:47
403	47:11	104	0:36	12:43
405	55:12	109	0:43	12:53
406	58:27	110	0:45	13:47
407	74:59	133	0:42	17:20
408	49:56	104	0:39	11:32
413	45:15	76	0:41	8:53
415	59:09	74	0:58	11:12
419	0:00	0	0:00	0:00
425	225:33	264	1:28	67:38
426	116:29	153	1:34	46:18
427	84:05	160	0:47	34:26
429	50:11	104	0:39	19:49
430	59:07	143	0:35	24:46
433	61:08	152	0:33	25:12
435	0:00	0	0:00	0:00
436	0:00	0	0:00	0:00
437	22:05	42	0:40	3:56
438	0:00	0	0:00	0:00
439	0:00	0	0:00	0:00
444	0:00	0	0:00	0:00
446	69:51	100	0:49	14:06
484	6:29	56	0:10	1:17
541	57:20	181	0:38	20:52
542	142:52	244	1:10	57:30
544	94:35	159	1:09	39:53
547	125:12	223	0:53	45:05
549	64:02	146	0:45	19:45
556	9:15	32	0:24	2:46
559	48:02	126	0:33	17:51
561	110:17	203	0:52	31:09
564	163:07	253	0:59	46:00
569	78:03	89	1:09	24:27
570	91:46	93	1:11	38:41
572	27:56	78	0:31	11:41
574	125:16	190	0:53	49:32
575	69:37	106	1:07	24:41
576	165:45	246	1:09	47:12
578	131:58	238	0:50	39:18
583	188:22	296	1:01	58:53
584	102:48	196	0:48	33:56
585	109:04	204	0:41	34:29

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SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Max shadow hours per day [h/day]	Shadow, expected values
	Shadow hours per year [h/year]	Shadow days per year [days/year]		Shadow hours per year [h/year]
586	116:33	153	1:08	26:56
587	109:14	151	1:08	25:19
589	128:10	159	1:12	30:25
590	58:43	130	0:41	13:47
592	120:05	163	1:06	34:58
593	48:42	125	0:32	11:56
594	49:20	100	0:43	14:52
595	40:01	94	0:36	10:59
596	39:49	94	0:36	10:38
597	40:14	99	0:34	10:21
598	35:30	84	0:36	11:01
599	32:49	81	0:35	10:08
600	37:59	87	0:38	11:47
601	42:49	91	0:41	13:38
604	99:20	165	0:57	36:14
607	64:07	154	0:50	18:10
609	52:22	126	0:35	15:12
615	6:06	42	0:14	1:16
620	0:00	0	0:00	0:00
621	99:14	204	1:03	26:10
622	18:11	83	0:20	4:43
624	92:36	86	1:27	19:59
625	99:29	179	0:52	26:51
629	102:52	190	1:03	28:50
633	97:14	152	0:58	23:56
648	122:35	148	1:19	42:15
649	102:53	169	1:08	26:39
650	105:43	170	1:15	38:12
651	73:43	147	0:51	16:24
654	12:02	60	0:19	3:43
655	20:02	82	0:29	4:40
656	9:27	56	0:16	2:47
659	0:00	0	0:00	0:00
660	75:45	144	0:53	21:03
664	125:51	118	1:13	29:15
666	51:52	111	0:35	21:53
667	65:02	136	0:38	26:38
670	42:04	105	0:32	9:59
675	15:35	44	0:27	7:36
677	0:00	0	0:00	0:00
679	0:00	0	0:00	0:00
684	0:00	0	0:00	0:00
687	80:26	132	0:49	35:17
690	22:10	98	0:23	7:22
691	47:50	153	0:38	12:29
694	66:37	110	0:50	14:41
696	35:53	70	0:40	16:52
697	52:05	100	0:48	21:17
699	0:00	0	0:00	0:00
706	0:00	0	0:00	0:00
707	26:16	58	0:32	5:38
710	50:26	121	0:33	12:13
713	0:00	0	0:00	0:00
714	0:00	0	0:00	0:00

To be continued on next page...

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SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Max shadow hours per day [h/day]	Shadow, expected values
	Shadow hours per year [h/year]	Shadow days per year [days/year]		Shadow hours per year [h/year]
719	0:00	0	0:00	0:00
722	0:00	0	0:00	0:00
736	11:37	34	0:27	3:44
737	11:38	34	0:27	3:53
738	16:27	42	0:30	7:31
742	26:44	68	0:27	11:09
743	22:17	61	0:29	9:49
744	15:26	47	0:26	7:12
748	28:55	79	0:26	12:01
750	26:28	86	0:26	11:04
753	31:36	79	0:35	11:24
756	29:17	78	0:33	12:02
757	50:02	92	0:46	15:42
764	0:00	0	0:00	0:00
766	0:00	0	0:00	0:00
767	8:19	27	0:24	3:08
768	83:32	114	0:53	34:00
769	131:21	150	1:08	56:17
770	122:40	148	1:03	52:35
771	30:14	77	0:27	11:35
772	0:00	0	0:00	0:00
773	0:00	0	0:00	0:00
774	0:00	0	0:00	0:00
776	0:00	0	0:00	0:00
777	0:00	0	0:00	0:00
778	0:00	0	0:00	0:00
780	29:50	63	0:34	11:25
783	37:57	82	0:32	14:39
784	0:00	0	0:00	0:00
786	0:00	0	0:00	0:00
789	26:46	77	0:26	10:14
795	0:00	0	0:00	0:00
801	40:21	100	0:40	12:33
802	39:00	96	0:39	13:13
806	116:41	243	0:40	39:47
807	124:02	242	0:41	40:34
810	45:38	75	0:43	18:56
811	105:54	165	0:59	30:51
813	0:00	0	0:00	0:00
832	0:00	0	0:00	0:00
833	45:42	102	0:47	21:00
835	27:05	97	0:34	12:46
836	128:28	155	1:12	54:43
837	231:09	195	1:40	98:56
838	28:12	83	0:27	12:40
839	15:07	50	0:26	7:18
840	21:16	70	0:27	9:55
842	28:06	63	0:35	13:06
843	24:57	58	0:34	11:44
846	59:37	82	0:51	24:52
848	6:50	31	0:20	1:58
849	35:32	82	0:42	14:02
851	215:06	236	1:26	62:09
856	103:58	162	1:08	25:39

To be continued on next page...

Project:

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SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Max shadow hours per day	Shadow, expected values
	Shadow hours per year [h/year]	Shadow days per year [days/year]		Shadow hours per year [h/year]
873	28:44	82	0:29	7:14
874	27:06	77	0:29	7:09
875	27:48	83	0:28	6:45
876	13:57	38	0:28	3:44
877	17:04	49	0:27	3:36
878	18:13	53	0:27	3:49
879	24:32	76	0:25	4:55
880	15:21	45	0:26	3:15
881	14:20	41	0:27	3:20
882	14:13	41	0:27	3:35
883	26:57	76	0:29	7:28
884	26:15	72	0:26	5:11
885	38:52	76	0:40	8:22
886	73:46	115	0:58	15:25
887	82:09	120	1:01	17:03
888	97:19	114	1:08	20:49
892	80:14	110	1:09	17:30
893	100:59	118	1:16	22:24
894	58:19	102	0:46	12:33
902	28:26	70	0:28	6:15
903	12:46	40	0:25	3:18
907	164:32	251	1:07	46:02
909	89:13	114	1:24	19:56
912	130:17	165	1:11	32:54
915	60:25	162	0:34	15:54
916	69:47	189	0:32	23:06
917	70:19	190	0:29	26:24
918	41:57	115	0:30	15:35
919	43:16	117	0:30	16:15
920	39:41	113	0:30	12:26
921	42:28	118	0:30	12:17
922	26:03	74	0:29	7:28
923	23:49	68	0:28	7:11
924	23:19	70	0:27	6:52
925	24:03	69	0:28	7:28
926	36:16	107	0:28	11:30
927	57:49	166	0:29	19:48
928	68:50	161	0:36	17:14
936	49:17	129	0:30	18:27
937	40:11	129	0:27	15:23
938	56:45	161	0:27	21:58
939	37:34	114	0:26	14:41
951	21:22	66	0:26	8:33
952	19:42	64	0:25	7:47
953	9:56	32	0:24	4:25
966	104:50	203	0:55	36:11
967	145:48	234	1:03	46:49
968	141:57	225	1:03	44:44
969	39:14	95	0:33	16:06
977	163:15	215	1:14	64:00
979	144:46	178	1:42	37:54
981	67:51	86	1:00	28:22
984	36:04	116	0:32	15:29
986	54:27	108	0:43	16:34

To be continued on next page...

Project:

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SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Max shadow hours per day [h/day]	Shadow, expected values
	Shadow hours per year [h/year]	Shadow days per year [days/year]		Shadow hours per year [h/year]
989	62:33	115	0:50	28:10
990	45:23	133	0:30	13:35
991	128:13	133	1:44	40:41
2209	68:06	119	0:44	26:21
2210	62:26	93	0:53	27:53
2217	18:54	66	0:25	6:02
2264	11:34	38	0:25	5:23
2412	14:25	41	0:28	4:00
2413	17:14	48	0:28	4:17
2414	16:46	48	0:28	4:09
2415	17:12	51	0:26	4:03
2421	15:24	41	0:29	4:29
2424	42:13	92	0:41	13:14
2425	46:55	96	0:43	14:43
2426	41:04	89	0:39	12:50
2431	38:49	86	0:39	12:24
2432	9:34	31	0:24	3:14
2433	10:42	32	0:26	3:31
2447	71:59	113	1:19	16:36
2450	32:33	60	0:41	9:00
2451	29:51	56	0:41	8:43
2455	46:08	81	0:49	15:36
2456	103:20	117	1:20	24:36
2458	20:23	48	0:33	5:50
2459	19:24	45	0:33	5:52
2592	0:00	0	0:00	0:00
2593	24:58	70	0:35	5:57
2601	24:13	75	0:32	5:42
2602	13:40	42	0:30	4:06
2605	24:30	80	0:31	6:58
2606	22:49	74	0:31	6:33
2609	18:28	47	0:31	8:37
2610	43:41	89	0:41	17:38
2612	51:54	110	0:42	16:04
2613	56:33	128	0:34	19:28
2616	154:47	184	1:47	38:27
2620	119:18	196	1:04	34:36
2624	115:59	178	1:08	28:27
2627	151:14	191	1:21	37:40
2629	146:09	183	1:26	36:53
2630	110:43	98	1:25	21:59
2631	114:03	110	1:24	23:25
2634	52:45	111	0:44	11:08
2640	49:34	115	0:36	10:49
2641	50:46	115	0:36	11:09
2645	51:05	112	0:40	10:56
2651	122:41	235	0:53	44:41
2653	31:46	119	0:30	11:54
2655	72:27	142	1:01	19:44
2790	16:08	75	0:21	4:18
2791	94:18	164	0:47	24:46
2792	79:05	130	0:48	27:52
2793	27:02	109	0:25	11:22
2800	22:43	85	0:25	8:11

To be continued on next page...

Project:

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SHADOW - Main Result

...continued from previous page

No.	Shadow, worst case		Max shadow hours per day	Shadow, expected values
	Shadow hours per year [h/year]	Shadow days per year [days/year]		Shadow hours per year [h/year]
2801	208:27	265	1:45	64:13
2802	35:11	88	0:43	11:39
2807	96:55	168	0:57	37:12
2808	64:36	117	0:47	27:33
2814	41:24	83	0:44	18:50
2816	0:00	0	0:00	0:00
2817	22:50	62	0:26	8:41
2818	0:00	0	0:00	0:00
2835	26:07	63	0:33	9:50
2836	6:48	33	0:16	2:30
3035	0:00	0	0:00	0:00
3036	0:00	0	0:00	0:00
3039	0:00	0	0:00	0:00
3040	0:00	0	0:00	0:00
3041	0:00	0	0:00	0:00
3042	0:00	0	0:00	0:00
3047	0:00	0	0:00	0:00
3048	0:00	0	0:00	0:00
3054	0:00	0	0:00	0:00
3055	0:00	0	0:00	0:00
3056	0:00	0	0:00	0:00
3057	0:00	0	0:00	0:00
3059	0:00	0	0:00	0:00
3060	0:00	0	0:00	0:00
3061	0:00	0	0:00	0:00
3062	0:00	0	0:00	0:00
3063	0:14	5	0:04	0:05
3066	0:00	0	0:00	0:00
3070	0:00	0	0:00	0:00
3071	0:00	0	0:00	0:00
3072	0:00	0	0:00	0:00
3081	0:00	0	0:00	0:00
3487	39:37	136	0:28	14:02
3488	28:14	115	0:24	10:32
3561	0:00	0	0:00	0:00
3562	0:00	0	0:00	0:00
3563	0:00	0	0:00	0:00
3564	0:00	0	0:00	0:00
3565	0:00	0	0:00	0:00
3566	0:00	0	0:00	0:00
3568	0:00	0	0:00	0:00
3571	0:00	0	0:00	0:00
3572	0:00	0	0:00	0:00
3575	0:00	0	0:00	0:00
3576	0:00	0	0:00	0:00
3577	0:00	0	0:00	0:00
3578	0:00	0	0:00	0:00
3666	18:18	45	0:31	5:05
3667	19:38	50	0:31	5:00
3668	111:13	89	1:42	23:16
3670	142:02	134	1:23	34:01
3687	37:56	88	0:37	11:59
3726	34:48	83	0:37	12:57
3727	38:43	89	0:38	14:55

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SHADOW - Main Result

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No.	Shadow, worst case		Max shadow hours per day [h/day]	Shadow, expected values
	Shadow hours per year [h/year]	Shadow days per year [days/year]		Shadow hours per year [h/year]
3728	29:53	76	0:33	11:25
3729	30:22	79	0:34	11:25
3730	31:18	80	0:34	11:20
3731	37:30	86	0:38	12:06
3732	36:06	85	0:37	12:03
3742	17:35	44	0:31	7:16
3743	17:37	44	0:31	7:48
3744	17:30	44	0:31	7:54
3745	17:25	44	0:31	8:08
3746	17:41	45	0:30	8:20
3747	17:43	47	0:30	8:21
3748	17:56	47	0:30	8:27
3749	17:54	48	0:30	8:25
3750	20:28	52	0:31	9:28
3751	20:29	51	0:32	9:36
3752	20:14	50	0:32	9:32
3753	20:02	50	0:32	9:28
3754	32:46	87	0:33	14:40
3755	35:02	91	0:34	15:47
3758	33:04	86	0:34	14:04
3769	20:56	54	0:31	9:28
3947	12:38	41	0:24	5:53
3948	13:07	41	0:25	6:05
3949	13:29	43	0:25	6:14
3950	13:42	42	0:25	6:24
3956	13:58	45	0:24	6:07
3957	15:12	47	0:25	6:32
3958	20:17	65	0:25	8:02
3959	19:06	63	0:25	7:33
3960	26:09	80	0:25	10:08
3961	26:55	79	0:26	10:26
4010	0:00	0	0:00	0:00
4015	0:00	0	0:00	0:00
4016	0:00	0	0:00	0:00
4017	0:00	0	0:00	0:00
4018	0:00	0	0:00	0:00
4021	1:43	13	0:10	0:18
4025	0:00	0	0:00	0:00
4048	60:04	72	0:59	11:25
4049	58:12	96	0:54	12:04
4050	0:00	0	0:00	0:00
4051	34:08	75	0:41	7:17
4052	41:38	83	0:46	8:40
4053	83:58	116	1:01	16:59
4054	129:22	151	1:18	27:06
4056	33:58	77	0:40	7:29
4057	30:40	73	0:36	6:55
4058	150:29	208	1:08	40:37
4059	38:12	88	0:38	12:26
4083	103:10	184	0:47	28:15
4084	124:11	177	1:21	36:34
4085	127:19	177	1:11	44:07
4086	32:02	80	0:31	10:14
4087	32:16	82	0:31	10:24

To be continued on next page...

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SHADOW - Main Result

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No.	Shadow, worst case		Max shadow hours per day [h/day]	Shadow, expected values
	Shadow hours per year [h/year]	Shadow days per year [days/year]		Shadow hours per year [h/year]
4088	33:01	82	0:31	11:43
4099	25:10	82	0:25	9:47
4102	18:49	59	0:25	7:34
4106	29:32	49	0:50	9:15
4107	15:45	42	0:30	6:53
4108	15:05	44	0:26	6:59
4109	0:00	0	0:00	0:00
4110	0:00	0	0:00	0:00
4114	0:00	0	0:00	0:00
4164	0:00	0	0:00	0:00
4165	0:00	0	0:00	0:00
4166	0:00	0	0:00	0:00
4168	0:00	0	0:00	0:00
4175	0:00	0	0:00	0:00
4176	0:00	0	0:00	0:00
4180	0:00	0	0:00	0:00
4181	0:00	0	0:00	0:00
4190	0:00	0	0:00	0:00
4191	0:00	0	0:00	0:00
4192	0:00	0	0:00	0:00
4193	0:00	0	0:00	0:00
4194	0:00	0	0:00	0:00
4207	22:21	60	0:25	4:51
4208	33:46	72	0:32	7:25
4209	30:36	84	0:29	6:55
4223	21:01	57	0:29	8:57
4224	24:20	67	0:29	9:56
4225	33:22	86	0:29	13:03
4226	32:32	77	0:29	12:37
4227	28:02	66	0:29	10:50
4229	1:38	14	0:09	0:36
4230	22:41	59	0:30	9:44
4246	0:00	0	0:00	0:00
4249	18:51	54	0:25	7:13
4251	0:00	0	0:00	0:00
4252	0:00	0	0:00	0:00
4253	0:00	0	0:00	0:00
4254	0:00	0	0:00	0:00
4260	0:00	0	0:00	0:00
4261	0:00	0	0:00	0:00
4262	0:00	0	0:00	0:00
4448	178:57	225	1:23	69:18
4449	118:20	195	1:01	39:49
4450	57:07	106	0:42	24:42
4451	23:09	69	0:27	9:50
4452	36:35	84	0:32	8:12
4462	9:10	30	0:23	2:46
4463	12:21	46	0:23	3:23
4464	114:00	154	1:06	25:10
4465	0:00	0	0:00	0:00
4468	182:57	288	1:02	65:30
4470	169:56	213	1:34	68:00
4471	171:38	321	0:47	59:20
4472	17:47	44	0:31	8:08

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SHADOW - Main Result

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No.	Shadow, worst case		Shadow, expected values	
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
4473	43:11	104	0:38	14:27
4475	39:53	72	0:38	15:27
4476	36:27	118	0:29	15:15
4478	0:00	0	0:00	0:00
4483	70:48	108	0:47	28:54
4490	40:41	93	0:38	11:31
4491	38:44	88	0:38	11:47
4494	60:49	96	0:44	25:46
4495	8:24	29	0:22	3:28
4498	56:05	91	1:02	13:37
4499	0:00	0	0:00	0:00
4504	50:03	113	0:37	10:50
4505	56:19	110	1:12	12:07
4506	81:48	125	0:55	32:04

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

No.	Name	Worst case [h/year]	Expected [h/year]
T1	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (77)	162:20	50:10
T11	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (86)	179:58	54:09
T13	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (87)	212:16	79:24
T14	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (88)	15:04	4:41
T15	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (89)	65:34	15:14
T17	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (90)	232:17	56:01
T18	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (91)	361:13	98:18
T19	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (92)	102:50	35:28
T2	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (78)	114:09	23:59
T21	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (93)	138:37	37:04
T22	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (94)	242:41	75:52
T24	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (95)	392:38	115:08
T26	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (96)	209:26	74:32
T28	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (97)	88:39	27:27
T29	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (98)	331:38	86:28
T3	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (79)	239:26	84:25
T32	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (99)	48:05	18:33
T33	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (100)	201:38	61:56
T34	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (101)	95:56	42:09
T35	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (102)	129:26	46:22
T37	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (103)	24:38	7:39
T38	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (152)	43:29	11:43
T4	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (80)	389:42	95:19
T40	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (104)	328:07	121:13
T42	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (105)	155:00	48:58
T43	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (106)	106:52	43:43
T44	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (107)	218:14	85:26
T45	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (108)	81:26	18:02
T46	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (109)	310:59	95:25
T47	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (110)	217:28	88:19
T49	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (111)	18:50	8:19
T5	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (81)	266:05	97:34
T50	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (112)	37:30	13:38
T51	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (113)	230:09	74:20
T52	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (114)	190:02	67:20

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SHADOW - Main Result

...continued from previous page

No.	Name	Worst case [h/year]	Expected [h/year]
T53	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (115)	181:07	63:05
T55	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (116)	372:57	103:20
T59	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (117)	78:24	26:44
T6	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (82)	137:42	54:52
T60	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (118)	94:30	33:04
T61	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (119)	253:42	110:15
T62	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (120)	160:45	68:10
T63	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (121)	365:45	77:37
T64	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (122)	256:19	101:06
T65	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (123)	207:26	67:04
T66	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (124)	42:58	16:46
T67	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (125)	66:28	17:54
T68	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (126)	289:25	91:03
T69	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (127)	288:13	84:09
T7	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (83)	138:17	32:43
T70	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (128)	29:46	12:16
T71	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (129)	50:29	12:32
T72	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (130)	35:41	14:19
T73	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (131)	108:40	29:17
T74	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (132)	114:26	36:56
T75	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (133)	115:17	48:39
T76	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (134)	311:31	86:03
T77	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (135)	238:18	74:07
T78	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (136)	9:49	3:18
T79	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (137)	441:03	128:47
T8	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (84)	118:14	33:34
T80	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (138)	6:34	2:33
T81	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (139)	429:53	122:30
T82	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (140)	62:17	14:27
T83	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (141)	113:38	30:18
T84	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (142)	174:27	65:10
T85	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (143)	60:03	16:13
T86	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (144)	186:37	49:33
T87	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (145)	390:05	127:22
T88	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (146)	344:00	102:52
T89	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (147)	126:23	32:28
T9	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (85)	387:25	131:58
T90	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (148)	38:44	7:47
T91	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (149)	99:51	28:20
T92	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (150)	51:37	11:21
T93	SENVION 3.4M140 3700 140.0 !O! hub: 80.0 m (TOT: 150.0 m) (151)	185:47	60:58

Project:

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10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 425 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (446)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

January		February		March		April		May		June	
1	07:40	08:47 (T44)	07:25	15:53 (T46)	06:47	08:02 (T59)	06:54	07:47 (T74)	06:07	07:30 (T74)	05:36
2	07:40	08:48 (T44)	07:24	15:54 (T46)	06:46	08:03 (T59)	06:53	07:44 (T74)	06:05	07:31 (T74)	05:36
3	07:41	08:48 (T44)	07:23	15:56 (T46)	06:44	08:04 (T59)	06:51	07:41 (T74)	06:04	07:32 (T74)	05:36
4	07:41	08:49 (T44)	07:22	15:57 (T46)	06:43	08:05 (T59)	06:49	07:40 (T74)	06:03	07:33 (T74)	05:35
5	07:41	08:49 (T44)	07:21	15:58 (T46)	06:42	08:06 (T59)	06:48	07:39 (T74)	06:02	07:34 (T74)	05:35
6	07:40	08:49 (T44)	07:20	15:59 (T46)	06:41	08:07 (T59)	06:46	07:38 (T74)	06:01	07:35 (T74)	05:34
7	07:40	08:50 (T44)	07:19	16:00 (T46)	06:40	08:08 (T59)	06:44	07:37 (T74)	06:00	07:36 (T74)	05:34
8	07:40	08:51 (T44)	07:18	16:01 (T46)	06:39	08:09 (T59)	06:43	07:36 (T74)	05:59	07:37 (T74)	05:34
9	07:40	08:52 (T44)	07:17	16:02 (T46)	06:38	08:10 (T59)	06:42	07:35 (T74)	05:58	07:38 (T74)	05:34
10	07:40	08:53 (T44)	07:16	16:03 (T46)	06:37	08:11 (T59)	06:41	07:34 (T74)	05:57	07:39 (T74)	05:34
11	07:40	08:54 (T44)	07:15	16:04 (T46)	06:36	08:12 (T59)	06:40	07:33 (T74)	05:56	07:40 (T74)	05:34
12	07:39	08:55 (T44)	07:14	16:05 (T46)	06:35	08:13 (T59)	06:39	07:32 (T74)	05:55	07:41 (T74)	05:34
13	07:39	08:56 (T44)	07:13	16:06 (T46)	06:34	08:14 (T59)	06:38	07:31 (T74)	05:54	07:42 (T74)	05:34
14	07:38	08:57 (T44)	07:12	16:07 (T46)	06:33	08:15 (T59)	06:37	07:30 (T74)	05:53	07:43 (T74)	05:34
15	07:38	08:58 (T44)	07:11	16:08 (T46)	06:32	08:16 (T59)	06:36	07:29 (T74)	05:52	07:44 (T74)	05:34
16	07:38	08:59 (T44)	07:10	16:09 (T46)	06:31	08:17 (T59)	06:35	07:28 (T74)	05:51	07:45 (T74)	05:34
17	07:37	09:00 (T44)	07:09	16:10 (T46)	06:30	08:18 (T59)	06:34	07:27 (T74)	05:50	07:46 (T74)	05:34
18	07:37	09:01 (T44)	07:08	16:11 (T46)	06:29	08:19 (T59)	06:33	07:26 (T74)	05:49	07:47 (T74)	05:34
19	07:36	09:02 (T44)	07:07	16:12 (T46)	06:28	08:20 (T59)	06:32	07:25 (T74)	05:48	07:48 (T74)	05:34
20	07:35	09:03 (T44)	07:06	16:13 (T46)	06:27	08:21 (T59)	06:31	07:24 (T74)	05:47	07:49 (T74)	05:34
21	07:35	09:04 (T44)	07:05	16:14 (T46)	06:26	08:22 (T59)	06:30	07:23 (T74)	05:46	07:50 (T74)	05:34
22	07:34	09:05 (T44)	07:04	16:15 (T46)	06:25	08:23 (T59)	06:29	07:22 (T74)	05:45	07:51 (T74)	05:34
23	07:33	09:06 (T44)	07:03	16:16 (T46)	06:24	08:24 (T59)	06:28	07:21 (T74)	05:44	07:52 (T74)	05:34
24	07:33	09:07 (T44)	07:02	16:17 (T46)	06:23	08:25 (T59)	06:27	07:20 (T74)	05:43	07:53 (T74)	05:34
25	07:32	09:08 (T44)	07:01	16:18 (T46)	06:22	08:26 (T59)	06:26	07:19 (T74)	05:42	07:54 (T74)	05:34
26	07:31	09:09 (T44)	07:00	16:19 (T46)	06:21	08:27 (T59)	06:25	07:18 (T74)	05:41	07:55 (T74)	05:34
27	07:30	09:10 (T44)	06:59	16:20 (T46)	06:20	08:28 (T59)	06:24	07:17 (T74)	05:40	07:56 (T74)	05:34
28	07:29	09:11 (T44)	06:58	16:21 (T46)	06:19	08:29 (T59)	06:23	07:16 (T74)	05:39	07:57 (T74)	05:34
29	07:28	09:12 (T44)	06:57	16:22 (T46)	06:18	08:30 (T59)	06:22	07:15 (T74)	05:38	07:58 (T74)	05:34
30	07:27	09:13 (T44)	06:56	16:23 (T46)	06:17	08:31 (T59)	06:21	07:14 (T74)	05:37	07:59 (T74)	05:34
31	07:26	09:14 (T44)	06:55	16:24 (T46)	06:16	08:32 (T59)	06:20	07:13 (T74)	05:36	08:00 (T74)	05:34
Potential sun hours	293	295	370	401	452	457					
Total, worst case	1707	1472	1177	1453	258						
Sun reduction	0.39	0.42	0.44	0.51	0.55						
Oper. time red.	1.00	1.00	1.00	1.00	1.00						
Wind dir. red.	0.66	0.65	0.67	0.67	0.67						
Total reduction	0.26	0.27	0.30	0.34	0.37						
Total, real	437	398	348	498	95						

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

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

Baron_SFA

Printed/Page

10/11/2017 10:32 AM / 2

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 425 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (446)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	05:37	06:02	06:35	07:29 (T74) 07:07	17:19 (T88) 06:43	07:35 (T59) 07:20	
	20:52	20:32	19:46	08:22 (T74) 18:53	18:07 (T88) 17:05	08:10 (T59) 16:39	
2	05:37	06:03	06:36	07:30 (T74) 07:08	17:18 (T88) 06:45	07:37 (T59) 07:21	
	20:52	20:31	19:44	08:21 (T74) 18:52	18:07 (T88) 17:04	08:10 (T59) 16:39	
3	05:38	06:04	06:37	07:30 (T74) 07:09	17:17 (T88) 06:46	07:38 (T59) 07:22	
	20:52	20:30	19:43	08:20 (T74) 18:50	18:07 (T88) 17:02	08:08 (T59) 16:38	
4	05:38	06:05	06:38	07:30 (T74) 07:10	17:17 (T88) 06:47	07:39 (T59) 07:23	
	20:51	20:29	13 08:06 (T74) 19:41	49 08:19 (T74) 18:48	51 18:08 (T88) 17:01	27 08:06 (T59) 16:38	
5	05:39	06:06	06:39	07:31 (T74) 07:11	17:17 (T88) 06:48	07:42 (T59) 07:24	
	20:51	20:28	20 08:10 (T74) 19:39	46 08:17 (T74) 18:47	51 18:08 (T88) 17:00	32 15:43 (T46) 16:38	
6	05:40	06:07	06:40	07:32 (T74) 07:13	17:17 (T88) 06:49	07:44 (T59) 07:25	
	20:51	20:27	24 08:12 (T74) 19:38	44 08:16 (T74) 18:45	56 18:07 (T88) 16:59	34 15:46 (T46) 16:38	
7	05:40	06:08	06:41	07:33 (T74) 07:14	17:17 (T88) 06:50	07:48 (T59) 07:26	
	20:51	20:25	28 08:14 (T74) 19:36	41 08:14 (T74) 18:43	69 18:07 (T88) 16:57	30 15:48 (T46) 16:38	
8	05:41	06:09	06:42	07:34 (T74) 07:15	17:17 (T88) 06:51	08:43 (T59) 06:52	
	20:50	20:24	32 08:16 (T74) 19:34	38 08:12 (T74) 18:41	76 18:07 (T88) 16:56	24 15:51 (T46) 16:38	
9	05:42	06:10	06:43	07:35 (T74) 07:16	17:17 (T88) 06:52	15:25 (T46) 07:28	
	20:50	20:23	35 08:17 (T74) 19:32	35 08:10 (T74) 18:40	78 18:06 (T88) 16:55	27 15:52 (T46) 16:38	
10	05:42	06:12	06:44	07:37 (T74) 07:17	17:17 (T88) 06:53	15:23 (T46) 07:29	
	20:50	20:21	37 08:18 (T74) 19:31	31 08:08 (T74) 18:38	82 18:06 (T88) 16:54	30 15:53 (T46) 16:38	
11	05:43	06:13	06:46	07:39 (T74) 07:18	17:17 (T88) 06:54	15:23 (T46) 07:30	
	20:49	20:20	39 08:19 (T74) 19:29	26 08:05 (T74) 18:36	84 18:05 (T88) 16:53	31 15:54 (T46) 16:38	
12	05:44	06:14	06:47	07:42 (T74) 07:19	17:17 (T88) 06:55	15:22 (T46) 07:30	
	20:49	20:19	42 08:20 (T74) 19:27	19 08:01 (T74) 18:35	87 18:05 (T88) 16:52	33 15:55 (T46) 16:38	
13	05:45	06:15	06:48	07:48 (T74) 07:20	17:17 (T88) 06:56	15:21 (T46) 07:31	
	20:48	20:17	44 08:21 (T74) 19:25	6 07:54 (T74) 18:33	88 18:04 (T88) 16:51	34 15:55 (T46) 16:38	
14	05:45	06:16	06:49	07:36 (T74) 06:49	18:04 (T88) 16:51	15:21 (T46) 07:32	
	20:48	20:16	46 08:22 (T74) 19:24	18:31	88 18:03 (T88) 16:50	36 15:57 (T46) 16:38	
15	05:46	06:17	06:50	07:23 (T59) 07:01	18:03 (T88) 16:50	15:21 (T46) 07:33	
	20:47	20:14	48 08:23 (T74) 19:22	18:30	88 18:01 (T88) 16:49	36 15:57 (T46) 16:38	
16	05:47	06:18	06:51	07:24 (T59) 07:02	18:01 (T88) 16:49	15:20 (T46) 07:33	
	20:47	20:13	48 08:23 (T74) 19:20	18:28	88 18:01 (T88) 16:48	37 15:57 (T46) 16:39	
17	05:48	06:19	06:52	07:25 (T59) 07:03	18:01 (T88) 16:48	15:21 (T46) 07:34	
	20:46	20:12	50 08:24 (T74) 19:18	18:27	86 18:00 (T88) 16:47	38 15:59 (T46) 16:39	
18	05:49	06:20	06:53	07:26 (T59) 07:05	18:00 (T88) 16:47	15:20 (T46) 07:35	
	20:45	20:10	51 08:24 (T74) 19:16	18:25	85 17:58 (T88) 16:47	39 15:59 (T46) 16:39	
19	05:50	06:21	06:54	07:28 (T59) 07:06	17:58 (T88) 16:47	15:20 (T46) 07:35	
	20:45	20:09	53 08:25 (T74) 19:15	18:24	83 17:56 (T88) 16:46	39 15:59 (T46) 16:40	
20	05:51	06:22	06:55	07:29 (T59) 07:07	17:56 (T88) 16:46	15:21 (T46) 07:36	
	20:44	20:07	53 08:25 (T74) 19:13	18:22	80 17:55 (T88) 16:45	39 16:00 (T46) 16:40	
21	05:51	06:23	06:56	07:31 (T74) 06:56	17:55 (T88) 16:45	15:21 (T46) 07:37	
	20:43	20:06	54 08:25 (T74) 19:11	14 17:54 (T88) 18:20	76 17:53 (T88) 16:44	39 16:00 (T46) 16:40	
22	05:52	06:24	06:57	07:32 (T74) 06:57	17:53 (T88) 16:44	15:21 (T46) 07:37	
	20:42	20:04	54 08:25 (T74) 19:09	23 17:59 (T88) 18:19	71 17:50 (T88) 16:44	49 16:00 (T46) 16:41	
23	05:53	06:25	06:58	07:33 (T74) 06:58	17:50 (T88) 16:44	15:21 (T46) 07:38	
	20:41	20:02	55 08:25 (T74) 19:08	28 18:01 (T88) 18:17	66 17:47 (T88) 16:43	55 16:00 (T46) 16:42	
24	05:54	06:26	06:59	07:34 (T74) 06:59	18:01 (T88) 18:17	16:43	08:39 (T44) 07:38
	20:40	20:01	55 08:25 (T74) 19:06	31 18:02 (T88) 18:16	56 17:43 (T88) 16:42	58 16:01 (T46) 16:42	
25	05:55	06:27	07:00	07:35 (T74) 07:00	18:02 (T88) 18:16	16:42	08:38 (T44) 07:38
	20:40	19:58	55 08:25 (T74) 19:04	36 18:04 (T88) 18:14	45 09:15 (T59) 16:42	61 16:01 (T46) 16:43	
26	05:56	06:29	07:01	07:36 (T74) 07:01	18:04 (T88) 18:14	16:42	08:37 (T44) 07:39
	20:39	19:56	56 08:25 (T74) 19:02	39 18:05 (T88) 18:13	45 09:15 (T59) 16:41	63 16:01 (T46) 16:43	
27	05:57	06:30	07:02	07:37 (T74) 07:02	18:05 (T88) 18:13	16:41	08:36 (T44) 07:39
	20:38	19:54	55 08:24 (T74) 19:00	41 18:06 (T88) 18:12	44 09:15 (T59) 16:41	65 16:01 (T46) 16:44	
28	05:58	06:31	07:03	07:38 (T74) 07:03	18:06 (T88) 18:12	16:41	08:36 (T44) 07:40
	20:37	19:53	55 08:24 (T74) 18:59	43 18:06 (T88) 18:10	42 09:14 (T59) 16:40	65 16:01 (T46) 16:45	
29	05:59	06:32	07:04	07:39 (T74) 07:04	18:07 (T88) 18:10	16:40	08:36 (T44) 07:40
	20:36	19:51	55 08:24 (T74) 18:57	45 18:07 (T88) 18:09	41 09:13 (T59) 16:40	67 16:02 (T46) 16:45	
30	06:00	06:33	07:05	07:40 (T74) 07:05	18:08 (T88) 18:09	16:40	08:36 (T44) 07:40
	20:35	19:49	54 08:23 (T74) 18:55	47 18:07 (T88) 18:07	40 09:13 (T59) 16:39	68 16:02 (T46) 16:46	
31	06:01	06:34	07:06	07:41 (T74) 07:06	18:08 (T88) 18:07	16:40	08:36 (T44) 07:40
	20:34	19:48	53 08:22 (T74) 18:53	46 18:06 (T88) 18:06	38 09:12 (T59) 16:39	67 16:12 (T46)	
Potential sun hours	464	431	375	343	294	283	
Total, worst case		1264	836	2031	1254	2081	
Sun reduction		0.91	0.53	0.45	0.29	0.28	
Oper. time red.		1.00	1.00	1.00	1.00	1.00	
Wind dir. red.		0.67	0.68	0.66	0.67	0.64	
Total reduction		0.61	0.36	0.29	0.19	0.18	
Total, real		772	299	596	241	373	

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

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

Project:
Baron_SFA

Printed/Page
10/11/2017 10:32 AM / 3

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 426 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (447)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	07:25	06:47	06:55	06:07	07:18 (T44) 05:37
2	16:48	17:24	18:00	19:36	20:09	07:27 (T44) 20:40
3	07:40	07:24	06:46	06:53	06:05	05:36
4	16:49	17:25	18:01	19:37	20:10	20:41
5	07:41	07:23	06:44	06:51	06:04	05:36
6	16:50	17:26	18:02	19:38	20:11	20:42
7	07:41	07:22	06:43	06:49	06:03	05:35
8	16:51	17:28	18:03	19:39	20:12	20:42
9	07:41	07:21	06:41	06:48	07:25 (T44) 06:01	05:35
10	16:52	17:29	18:05	19:40	9 07:34 (T44) 20:13	20:43
11	07:40	07:20	06:39	06:46	07:21 (T44) 06:00	05:34
12	16:53	17:30	18:06	19:42	16 07:37 (T44) 20:14	20:44
13	07:40	07:19	06:38	07:05 (T47) 06:44	07:18 (T44) 05:59	05:34
14	16:54	17:32	18:07	13 07:18 (T47) 19:43	22 07:40 (T44) 20:15	20:44
15	07:40	07:18	07:36	08:03 (T47) 06:43	07:16 (T44) 05:58	05:34
16	16:55	17:33	18:08	18 08:21 (T47) 19:44	26 07:42 (T44) 20:16	20:45
17	07:40	07:16	07:34	08:01 (T47) 06:41	07:14 (T44) 05:57	05:34
18	16:56	17:34	18:09	21 08:22 (T47) 19:45	28 07:42 (T44) 20:18	20:46
19	07:40	07:15	07:33	07:59 (T47) 06:39	07:13 (T44) 05:55	05:33
20	16:57	17:36	18:11	24 08:23 (T47) 19:46	31 07:44 (T44) 20:19	20:46
21	07:40	07:14	07:31	07:58 (T47) 06:38	07:11 (T44) 05:54	05:33
22	16:58	17:37	18:12	25 08:23 (T47) 19:47	33 07:44 (T44) 20:20	20:47
23	07:39	07:12	07:29	07:58 (T47) 06:36	07:10 (T44) 05:53	05:33
24	16:59	17:38	18:13	26 08:24 (T47) 19:48	34 07:44 (T44) 20:21	20:47
25	07:39	07:11	07:27	07:57 (T47) 06:34	07:10 (T44) 05:52	05:33
26	17:00	17:39	18:14	27 08:24 (T47) 19:49	35 07:45 (T44) 20:22	20:48
27	07:38	07:10	07:26	07:56 (T47) 06:33	07:09 (T44) 05:51	05:33
28	17:01	17:41	18:15	28 08:24 (T47) 19:51	36 07:45 (T44) 20:23	20:49
29	07:38	07:08	07:24	07:56 (T47) 06:31	07:08 (T44) 05:50	05:33
30	17:02	17:42	18:16	28 08:24 (T47) 19:52	37 07:45 (T44) 20:24	20:49
31	07:38	07:07	07:22	07:56 (T47) 06:29	07:08 (T44) 05:49	05:33
32	17:04	17:43	18:18	28 08:24 (T47) 19:53	37 07:45 (T44) 20:25	20:49
33	07:37	07:06	07:21	07:55 (T47) 06:28	07:07 (T44) 05:48	05:33
34	17:05	17:45	18:19	28 08:23 (T47) 19:54	38 07:45 (T44) 20:26	20:50
35	07:37	07:04	07:19	07:55 (T47) 06:26	07:07 (T44) 05:47	05:33
36	17:06	17:46	18:20	27 08:22 (T47) 19:55	38 07:45 (T44) 20:27	20:50
37	07:36	07:03	07:17	07:56 (T47) 06:25	07:07 (T44) 05:46	05:33
38	17:07	17:47	18:21	26 08:22 (T47) 19:56	37 07:44 (T44) 20:28	20:51
39	07:35	07:01	07:15	07:57 (T47) 06:23	07:07 (T44) 05:45	05:33
40	17:08	17:48	18:22	23 08:20 (T47) 19:57	37 07:44 (T44) 20:29	20:51
41	07:35	07:00	07:14	07:57 (T47) 06:21	07:07 (T44) 05:44	19:23 (T46) 05:33
42	17:10	17:50	18:23	21 08:18 (T47) 19:59	36 07:43 (T44) 20:30	19:39 (T46) 20:51
43	07:34	06:58	07:12	07:58 (T47) 06:20	07:07 (T44) 05:43	19:20 (T46) 05:34
44	17:11	17:51	18:25	18 08:16 (T47) 20:00	36 07:43 (T44) 20:31	22 19:42 (T46) 20:51
45	07:33	06:57	07:10	08:01 (T47) 06:18	07:07 (T44) 05:42	19:17 (T46) 05:34
46	17:12	17:52	18:26	13 08:14 (T47) 20:00	34 07:41 (T44) 20:32	27 19:44 (T46) 20:52
47	07:33	06:55	07:08	06:17	07:08 (T44) 05:42	19:15 (T46) 05:34
48	17:13	17:54	18:27	20:01	33 07:41 (T44) 20:33	31 19:46 (T46) 20:52
49	07:32	06:54	07:07	06:15	07:08 (T44) 05:41	06:21 (T59) 05:34
50	17:15	17:55	18:28	20:02	31 07:39 (T44) 20:34	39 19:48 (T46) 20:52
51	07:31	06:52	07:05	06:14	07:10 (T44) 05:40	06:17 (T59) 05:35
52	17:16	17:56	18:29	20:03	28 07:38 (T44) 20:35	49 19:49 (T46) 20:52
53	07:30	06:51	07:03	06:12	07:10 (T44) 05:39	06:15 (T59) 05:35
54	17:17	17:57	18:30	20:04	26 07:36 (T44) 20:36	54 19:50 (T46) 20:52
55	07:29	06:49	07:01	06:11	07:11 (T44) 05:39	06:14 (T59) 05:36
56	17:19	17:58	18:31	20:05	24 07:35 (T44) 20:37	60 19:52 (T46) 20:52
57	07:28	06:48	07:00	06:10	07:13 (T44) 05:38	06:13 (T59) 05:36
58	17:20	17:59	18:32	20:06	21 07:34 (T44) 20:37	64 19:53 (T46) 20:52
59	07:27	06:47	06:58	06:08	07:15 (T44) 05:38	06:13 (T59) 05:36
60	17:21	17:59	18:33	20:08	16 07:31 (T44) 20:38	67 19:54 (T46) 20:52
61	07:26	06:46	06:56	06:07	05:37	06:12 (T59) 05:36
62	17:22	17:59	18:35	20:09	69 20:39	19:54 (T46) 20:52
Potential sun hours	294	295	370	401	452	457
Total, worst case			394	779	507	2661
Sun reduction			0.44	0.51	0.55	0.59
Oper. time red.			1.00	1.00	1.00	1.00
Wind dir. red.			0.65	0.68	0.65	0.66
Total reduction			0.29	0.35	0.36	0.39
Total, real			113	269	181	1030

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

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

Baron_SFA

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10/11/2017 10:32 AM / 4

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 426 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (447)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	05:37	06:13 (T59) 06:02	06:35	07:10 (T44) 07:07	07:36 (T47) 06:43	07:20	
	20:52	20:06 (T46) 20:32	19:46	07:43 (T44) 18:53	08:03 (T47) 17:05	16:39	
2	05:37	06:14 (T59) 06:03	06:36	07:11 (T44) 07:08	07:36 (T47) 06:45	07:21	
	20:52	20:06 (T46) 20:31	19:44	07:42 (T44) 18:52	08:02 (T47) 17:04	16:39	
3	05:38	06:14 (T59) 06:04	06:37	07:12 (T44) 07:09	07:38 (T47) 06:46	07:22	
	20:52	20:06 (T46) 20:30	19:43	07:40 (T44) 18:50	08:02 (T47) 17:02	16:39	
4	05:39	06:15 (T59) 06:05	06:38	07:13 (T44) 07:10	07:38 (T47) 06:47	07:23	
	20:51	20:06 (T46) 20:29	19:41	07:39 (T44) 18:48	08:00 (T47) 17:01	16:38	
5	05:39	06:15 (T59) 06:06	06:39	07:14 (T44) 07:11	07:39 (T47) 06:48	07:24	
	20:51	20:05 (T46) 20:28	19:39	07:36 (T44) 18:47	07:58 (T47) 17:00	16:38	
6	05:40	06:16 (T59) 06:07	06:40	07:16 (T44) 07:13	07:41 (T47) 06:50	07:25	
	20:51	20:06 (T46) 20:27	19:38	07:34 (T44) 18:45	07:56 (T47) 16:59	16:38	
7	05:40	06:17 (T59) 06:08	06:41	07:20 (T44) 07:14	07:44 (T47) 06:51	07:26	
	20:51	20:06 (T46) 20:25	19:36	07:29 (T44) 18:43	07:52 (T47) 16:57	16:38	
8	05:41	06:17 (T59) 06:09	06:42	07:15	07:15	06:52	07:27
	20:50	20:05 (T46) 20:24	19:34	18:41	18:41	16:56	16:38
9	05:42	06:17 (T59) 06:10	06:43	07:16	07:16	06:53	07:28
	20:50	20:05 (T46) 20:23	19:32	18:40	18:40	16:55	16:38
10	05:42	06:18 (T59) 06:12	06:44	07:17	07:17	06:55	07:29
	20:50	20:05 (T46) 20:21	19:31	18:38	18:38	16:54	16:38
11	05:43	06:18 (T59) 06:13	06:46	07:18	07:18	06:56	07:30
	20:49	20:03 (T46) 20:20	19:29	18:36	18:36	16:53	16:38
12	05:44	06:19 (T59) 06:14	07:26 (T44) 06:47	07:19	06:57	07:30	
	20:49	20:03 (T46) 20:19	11 07:37 (T44) 19:27	18:35	16:52	16:38	
13	05:45	06:21 (T59) 06:15	07:23 (T44) 06:48	07:20	06:58	07:31	
	20:48	20:03 (T46) 20:17	17 07:40 (T44) 19:25	18:33	16:51	16:38	
14	05:45	06:22 (T59) 06:16	07:21 (T44) 06:49	07:22	07:00	07:32	
	20:48	20:02 (T46) 20:16	21 07:42 (T44) 19:24	18:31	16:50	16:38	
15	05:46	06:22 (T59) 06:17	07:19 (T44) 06:50	07:23	07:01	07:33	
	20:47	20:01 (T46) 20:14	24 07:43 (T44) 19:22	18:30	16:49	16:38	
16	05:47	06:24 (T59) 06:18	07:17 (T44) 06:51	07:24	07:02	07:33	
	20:47	20:00 (T46) 20:13	27 07:44 (T44) 19:20	18:28	16:48	16:39	
17	05:48	06:26 (T59) 06:19	07:16 (T44) 06:52	07:25	07:03	07:34	
	20:46	19:59 (T46) 20:12	29 07:45 (T44) 19:18	18:27	16:47	16:39	
18	05:49	06:28 (T59) 06:20	07:15 (T44) 06:53	07:26	07:05	07:35	
	20:45	19:58 (T46) 20:10	31 07:46 (T44) 19:16	18:25	16:47	16:39	
19	05:50	19:24 (T46) 06:21	07:14 (T44) 06:54	07:28	07:06	07:35	
	20:44	19:57 (T46) 20:09	33 07:47 (T44) 19:15	18:24	16:46	16:40	
20	05:51	19:25 (T46) 06:22	07:13 (T44) 06:55	07:29	07:07	07:36	
	20:44	19:54 (T46) 20:07	34 07:47 (T44) 19:13	11 07:58 (T47) 18:22	16:45	16:40	
21	05:51	19:28 (T46) 06:23	07:12 (T44) 06:56	07:45 (T47) 07:30	07:08	07:37	
	20:43	19:53 (T46) 20:06	36 07:48 (T44) 19:11	17 08:02 (T47) 18:20	16:44	16:41	
22	05:52	19:30 (T46) 06:24	07:12 (T44) 06:57	07:43 (T47) 07:31	07:09	07:37	
	20:42	19:50 (T46) 20:04	36 07:48 (T44) 19:09	20 08:03 (T47) 18:19	16:44	16:41	
23	05:53	19:35 (T46) 06:25	07:11 (T44) 06:58	07:41 (T47) 07:32	07:11	07:38	
	20:41	19:46 (T46) 20:02	37 07:48 (T44) 19:08	23 08:04 (T47) 18:17	16:43	16:42	
24	05:54	06:26	07:10 (T44) 06:59	07:40 (T47) 07:34	07:12	07:38	
	20:40	20:01	38 07:48 (T44) 19:06	25 08:05 (T47) 18:16	16:42	16:42	
25	05:55	06:27	07:10 (T44) 07:00	07:39 (T47) 07:35	07:13	07:38	
	20:40	19:58	38 07:48 (T44) 19:04	26 08:05 (T47) 18:14	16:42	16:43	
26	05:56	06:29	07:10 (T44) 07:02	07:38 (T47) 07:36	07:14	07:39	
	20:39	19:56	37 07:47 (T44) 19:02	27 08:05 (T47) 18:13	16:41	16:43	
27	05:57	06:30	07:10 (T44) 07:03	07:37 (T47) 07:37	07:15	07:39	
	20:38	19:54	37 07:47 (T44) 19:01	28 08:05 (T47) 18:12	16:41	16:44	
28	05:58	06:31	07:10 (T44) 07:04	07:37 (T47) 07:38	07:17	07:39	
	20:37	19:53	37 07:47 (T44) 18:59	28 08:05 (T47) 18:10	16:40	16:45	
29	05:59	06:32	07:10 (T44) 07:05	07:36 (T47) 07:40	07:18	07:40	
	20:36	19:51	36 07:46 (T44) 18:57	28 08:04 (T47) 18:09	16:40	16:45	
30	06:00	06:33	07:10 (T44) 07:06	07:36 (T47) 07:41	07:19	07:40	
	20:35	19:49	35 07:45 (T44) 18:55	28 08:04 (T47) 18:07	16:39	16:46	
31	06:01	06:34	07:10 (T44)	07:42		07:40	
	20:34	19:48	34 07:44 (T44)	18:06		16:47	
Potential sun hours	464	431	375	343	294	283	
Total, worst case	1451	628	428	141			
Sun reduction	0.64	0.91	0.53	0.45			
Oper. time red.	1.00	1.00	1.00	1.00			
Wind dir. red.	0.65	0.68	0.66	0.65			
Total reduction	0.42	0.62	0.35	0.29			
Total, real	607	387	150	41			

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

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

Project:
Baron_SFA

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10/11/2017 10:32 AM / 5

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 427 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (448)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	07:40	07:25	06:47	06:55	06:07	06:54 (T44)	05:37
	16:48	17:24	18:00	19:36	20:09	07:34 (T44)	20:40
2	07:40	07:24	06:46	06:53	06:05	06:54 (T44)	05:36
	16:49	17:25	18:01	19:37	20:10	07:34 (T44)	20:41
3	07:41	07:23	06:44	06:51	06:04	06:54 (T44)	05:36
	16:50	17:26	18:02	19:38	20:11	07:33 (T44)	20:42
4	07:41	07:22	06:43	06:49	06:03	06:54 (T44)	05:35
	16:51	17:28	18:03	19:39	20:12	07:33 (T44)	20:42
5	07:41	07:21	06:41	06:48	06:01	06:55 (T44)	05:35
	16:52	17:29	18:05	19:40	20:13	07:33 (T44)	20:43
6	07:40	07:20	06:39	06:46	06:00	06:55 (T44)	05:34
	16:53	17:30	18:06	19:42	20:14	07:32 (T44)	20:44
7	07:40	07:19	06:38	06:44	05:59	06:55 (T44)	05:34
	16:54	17:32	18:07	19:43	20:15	07:31 (T44)	20:44
8	07:40	07:18	07:36	06:43	05:58	06:56 (T44)	05:34
	16:55	17:33	18:08	19:44	20:16	07:30 (T44)	20:45
9	07:40	07:16	07:34	06:41	05:57	06:57 (T44)	05:34
	16:56	17:34	18:09	19:45	20:18	07:29 (T44)	20:46
10	07:40	07:15	07:33	06:39	05:55	06:57 (T44)	05:33
	16:57	17:36	18:11	19:46	20:19	07:28 (T44)	20:46
11	07:40	07:14	07:31	08:01 (T47)	06:38	05:54	06:58 (T44)
	16:58	17:37	18:12	10 08:11 (T47)	19:47	20:20	07:27 (T44)
12	07:39	07:12	07:29	07:59 (T47)	06:36	05:53	07:00 (T44)
	16:59	17:38	18:13	16 08:15 (T47)	19:48	20:21	07:26 (T44)
13	07:39	07:11	07:27	07:56 (T47)	06:34	05:52	07:01 (T44)
	17:00	17:39	18:14	20 08:16 (T47)	19:49	20:22	07:25 (T44)
14	07:38	07:10	07:26	07:54 (T47)	06:33	07:15 (T44)	05:51
	17:01	17:41	18:15	23 08:17 (T47)	19:51	6 07:21 (T44)	20:23
15	07:38	07:08	07:24	07:53 (T47)	06:31	07:09 (T44)	05:50
	17:02	17:42	18:16	26 08:19 (T47)	19:52	16 07:25 (T44)	20:24
16	07:38	07:07	07:22	07:52 (T47)	06:29	07:07 (T44)	05:49
	17:04	17:43	18:18	27 08:19 (T47)	19:53	21 07:28 (T44)	20:25
17	07:37	07:06	07:21	07:51 (T47)	06:28	07:04 (T44)	05:48
	17:05	17:45	18:19	28 08:19 (T47)	19:54	26 07:30 (T44)	20:26
18	07:37	07:04	07:19	07:50 (T47)	06:26	07:03 (T44)	05:47
	17:06	17:46	18:20	29 08:19 (T47)	19:55	29 07:32 (T44)	20:27
19	07:36	07:03	07:17	07:50 (T47)	06:25	07:01 (T44)	05:46
	17:07	17:47	18:21	30 08:20 (T47)	19:56	31 07:32 (T44)	20:28
20	07:35	07:01	07:15	07:49 (T47)	06:23	07:00 (T44)	05:45
	17:08	17:48	18:22	30 08:19 (T47)	19:57	34 07:34 (T44)	20:29
21	07:35	07:00	07:14	07:49 (T47)	06:21	06:58 (T44)	05:44
	17:10	17:50	18:23	30 08:19 (T47)	19:59	36 07:34 (T44)	20:30
22	07:34	06:58	07:12	07:48 (T47)	06:20	06:58 (T44)	05:43
	17:11	17:51	18:25	30 08:18 (T47)	20:00	37 07:35 (T44)	20:31
23	07:33	06:57	07:10	07:49 (T47)	06:18	06:56 (T44)	05:42
	17:12	17:52	18:26	29 08:18 (T47)	20:00	39 07:35 (T44)	20:32
24	07:33	06:55	07:08	07:49 (T47)	06:17	06:56 (T44)	05:42
	17:13	17:54	18:27	28 08:17 (T47)	20:01	39 07:35 (T44)	20:33
25	07:32	06:54	07:07	07:50 (T47)	06:15	06:55 (T44)	05:41
	17:15	17:55	18:28	25 08:15 (T47)	20:02	40 07:35 (T44)	20:34
26	07:31	06:52	07:05	07:50 (T47)	06:14	06:55 (T44)	05:40
	17:16	17:56	18:29	24 08:14 (T47)	20:03	40 07:35 (T44)	20:35
27	07:30	06:51	07:03	07:52 (T47)	06:12	06:54 (T44)	05:39
	17:17	17:57	18:30	21 08:13 (T47)	20:04	41 07:35 (T44)	20:36
28	07:29	06:49	07:01	07:53 (T47)	06:11	06:54 (T44)	05:39
	17:19	17:58	18:31	17 08:10 (T47)	20:05	41 07:35 (T44)	20:37
29	07:28	06:48	07:00	07:55 (T47)	06:10	06:54 (T44)	05:38
	17:20	17:59	18:32	11 08:06 (T47)	20:06	41 07:35 (T44)	20:37
30	07:27	06:47	06:58	06:08	06:08	06:53 (T44)	05:38
	17:21	18:00	18:33	20:08	41 07:34 (T44)	20:38	27 19:58 (T46)
31	07:26	06:46	06:56	06:07	06:07	06:53 (T44)	05:37
	17:22	18:01	18:34	20:09	41 07:34 (T44)	20:39	30 19:59 (T46)
Potential sun hours	294	295	370	401	452	457	
Total, worst case			454	558	626	1302	
Sun reduction			0.44	0.51	0.55	0.59	
Oper. time red.			1.00	1.00	1.00	1.00	
Wind dir. red.			0.66	0.68	0.67	0.63	
Total reduction			0.29	0.34	0.37	0.37	
Total, real			131	192	229	483	

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

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

Baron_SFA

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10/11/2017 10:32 AM / 6

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 427 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (448)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37	19:28 (T46) 06:02	07:10 (T44) 06:35	07:07	07:36 (T47) 06:43	07:20
2	05:37	19:29 (T46) 06:03	07:09 (T44) 06:36	07:08	07:38 (T47) 06:45	07:21
3	05:38	19:29 (T46) 06:04	07:08 (T44) 06:37	07:09	07:51 (T47) 06:46	07:22
4	05:39	19:30 (T46) 06:05	07:07 (T44) 06:38	07:10	07:02 (T44) 06:47	07:23
5	05:39	19:30 (T46) 06:06	07:06 (T44) 06:39	07:11	07:03 (T44) 06:48	07:24
6	05:40	19:31 (T46) 06:07	07:05 (T44) 06:40	07:12	07:04 (T44) 06:49	07:25
7	05:40	19:32 (T46) 06:08	07:04 (T44) 06:41	07:13	07:05 (T44) 06:50	07:26
8	05:41	19:33 (T46) 06:09	07:03 (T44) 06:42	07:14	07:06 (T44) 06:51	07:27
9	05:42	19:34 (T46) 06:10	07:02 (T44) 06:43	07:15	07:07 (T44) 06:52	07:28
10	05:42	19:35 (T46) 06:11	07:01 (T44) 06:44	07:16	07:08 (T44) 06:53	07:29
11	05:43	19:35 (T46) 06:12	07:00 (T44) 06:45	07:17	07:09 (T44) 06:54	07:30
12	05:44	19:37 (T46) 06:14	07:02 (T44) 06:47	07:19	07:11 (T44) 06:57	07:32
13	05:45	19:38 (T46) 06:15	07:03 (T44) 06:48	07:20	07:12 (T44) 06:58	07:33
14	05:45	19:40 (T46) 06:16	07:04 (T44) 06:49	07:22	07:14 (T44) 06:59	07:34
15	05:46	19:41 (T46) 06:17	07:05 (T44) 06:50	07:23	07:15 (T44) 07:00	07:35
16	05:47	19:43 (T46) 06:18	07:06 (T44) 06:51	07:24	07:16 (T44) 07:01	07:36
17	05:48	19:46 (T46) 06:19	07:07 (T44) 06:52	07:25	07:17 (T44) 07:02	07:37
18	05:49	19:50 (T46) 06:20	07:08 (T44) 06:53	07:26	07:18 (T44) 07:03	07:38
19	05:50	19:54 (T46) 06:21	07:09 (T44) 06:54	07:27	07:19 (T44) 07:04	07:39
20	05:51	20:00 (T46) 06:22	07:10 (T44) 06:55	07:28	07:20 (T44) 07:05	07:40
21	05:51	20:02 (T46) 06:23	07:11 (T44) 06:56	07:29	07:21 (T44) 07:06	07:41
22	05:52	20:04 (T46) 06:24	07:12 (T44) 06:57	07:30	07:22 (T44) 07:07	07:42
23	05:53	20:06 (T46) 06:25	07:13 (T44) 06:58	07:31	07:23 (T44) 07:08	07:43
24	05:54	20:08 (T46) 06:26	07:14 (T44) 06:59	07:32	07:24 (T44) 07:09	07:44
25	05:55	20:10 (T46) 06:27	07:15 (T44) 07:00	07:33	07:25 (T44) 07:10	07:45
26	05:56	20:12 (T46) 06:28	07:16 (T44) 07:01	07:34	07:26 (T44) 07:11	07:46
27	05:57	20:14 (T46) 06:29	07:17 (T44) 07:02	07:35	07:27 (T44) 07:12	07:47
28	05:58	20:16 (T46) 06:30	07:18 (T44) 07:03	07:36	07:28 (T44) 07:13	07:48
29	05:59	20:18 (T46) 06:31	07:19 (T44) 07:04	07:37	07:29 (T44) 07:14	07:49
30	06:00	20:20 (T46) 06:32	07:20 (T44) 07:05	07:38	07:30 (T44) 07:15	07:50
31	06:01	20:22 (T46) 06:33	07:21 (T44) 07:06	07:39	07:31 (T44) 07:16	07:51
Potential sun hours	464	431	375	343	294	283
Total, worst case	667	979	428	31		
Sun reduction	0.64	0.91	0.53	0.45		
Oper. time red.	1.00	1.00	1.00	1.00		
Wind dir. red.	0.64	0.68	0.66	0.66		
Total reduction	0.41	0.62	0.35	0.29		
Total, real	271	602	148	9		

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

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

Baron_SFA

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Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 542 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (461)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June										
1	07:40	15:55 (T40)	07:25	06:48	06:55	07:14 (T66)	06:07	06:27 (T62)	05:37	06:26 (T62)						
2	16:48	18	16:13 (T40)	17:24	18:00	19:36	18	07:32 (T66)	20:09	52	07:19 (T62)	20:40	49	07:15 (T62)		
3	07:41	16:49	18	16:13 (T40)	17:25	18:01	19:37	20	07:32 (T66)	20:10	53	07:19 (T62)	20:41	48	07:15 (T62)	
4	07:41	16:50	17	16:13 (T40)	17:27	18:02	19:38	21	07:32 (T66)	20:11	55	07:19 (T62)	20:42	47	07:14 (T62)	
5	07:41	16:51	15	16:13 (T40)	17:28	18:04	19:39	23	07:32 (T66)	20:12	56	07:19 (T62)	20:42	46	07:14 (T62)	
6	07:41	16:52	14	16:12 (T40)	17:29	18:05	19:41	24	07:31 (T66)	20:13	58	07:20 (T62)	20:43	45	07:13 (T62)	
7	07:40	16:53	12	16:11 (T40)	17:31	18:06	19:42	25	07:30 (T66)	20:14	59	07:20 (T62)	20:44	45	07:14 (T62)	
8	07:40	16:54	10	16:11 (T40)	17:32	18:07	19:43	26	07:30 (T66)	20:15	60	07:20 (T62)	20:45	45	07:14 (T62)	
9	07:40	16:55	8	16:10 (T40)	17:33	18:08	19:44	27	07:29 (T66)	20:16	61	07:20 (T62)	20:46	44	07:14 (T62)	
10	07:40	16:56	6	16:09 (T40)	17:34	18:09	19:45	28	07:28 (T66)	20:17	62	07:20 (T62)	20:47	44	07:14 (T62)	
11	07:40	16:57	4	16:08 (T40)	17:35	18:10	19:46	29	07:27 (T66)	20:18	63	07:20 (T62)	20:48	43	07:13 (T62)	
12	07:40	16:58	3	16:07 (T40)	17:36	18:11	19:47	30	07:26 (T66)	20:19	64	07:20 (T62)	20:49	42	07:13 (T62)	
13	07:40	16:59	2	16:06 (T40)	17:37	18:12	19:48	31	07:25 (T66)	20:20	65	07:20 (T62)	20:50	42	07:13 (T62)	
14	07:40	17:00	1	16:05 (T40)	17:38	18:13	19:49	07:24 (T66)	20:21	66	07:20 (T62)	20:51	41	07:13 (T62)		
15	07:40	17:01	0	16:04 (T40)	17:39	18:14	19:50	07:23 (T66)	20:22	67	07:20 (T62)	20:52	41	07:13 (T62)		
16	07:40	17:02	0	16:03 (T40)	17:40	18:15	19:51	07:22 (T66)	20:23	68	07:20 (T62)	20:53	40	07:13 (T62)		
17	07:40	17:03	0	16:02 (T40)	17:41	18:16	19:52	07:21 (T66)	20:24	69	07:20 (T62)	20:54	40	07:13 (T62)		
18	07:40	17:04	0	16:01 (T40)	17:42	18:17	19:53	07:20 (T66)	20:25	70	07:19 (T62)	20:55	38	07:12 (T62)		
19	07:40	17:05	0	16:00 (T40)	17:43	18:18	19:54	07:19 (T66)	20:26	71	07:19 (T62)	20:56	38	07:12 (T62)		
20	07:40	17:06	0	15:59 (T40)	17:44	18:19	19:55	07:18 (T66)	20:27	72	07:19 (T62)	20:57	38	07:12 (T62)		
21	07:40	17:07	0	15:58 (T40)	17:45	18:20	19:56	07:17 (T66)	20:28	73	07:19 (T62)	20:58	38	07:12 (T62)		
22	07:40	17:08	0	15:57 (T40)	17:46	18:21	19:57	07:16 (T66)	20:29	74	07:19 (T62)	20:59	38	07:12 (T62)		
23	07:40	17:09	0	15:56 (T40)	17:47	18:22	19:58	07:15 (T66)	20:30	75	07:19 (T62)	21:00	38	07:12 (T62)		
24	07:40	17:10	0	15:55 (T40)	17:48	18:23	19:59	07:14 (T66)	20:31	76	07:19 (T62)	21:01	38	07:12 (T62)		
25	07:40	17:11	0	15:54 (T40)	17:49	18:24	20:00	07:13 (T66)	20:32	77	07:19 (T62)	21:02	38	07:12 (T62)		
26	07:40	17:12	0	15:53 (T40)	17:50	18:25	20:01	07:12 (T66)	20:33	78	07:19 (T62)	21:03	38	07:12 (T62)		
27	07:40	17:13	0	15:52 (T40)	17:51	18:26	20:02	07:11 (T66)	20:34	79	07:19 (T62)	21:04	38	07:12 (T62)		
28	07:40	17:14	0	15:51 (T40)	17:52	18:27	20:03	07:10 (T66)	20:35	80	07:19 (T62)	21:05	38	07:12 (T62)		
29	07:40	17:15	0	15:50 (T40)	17:53	18:28	20:04	07:09 (T66)	20:36	81	07:19 (T62)	21:06	38	07:12 (T62)		
30	07:40	17:16	0	15:49 (T40)	17:54	18:29	20:05	07:08 (T66)	20:37	82	07:19 (T62)	21:07	38	07:12 (T62)		
31	07:40	17:17	0	15:48 (T40)	17:55	18:30	20:06	07:07 (T66)	20:38	83	07:19 (T62)	21:08	38	07:12 (T62)		
Potential sun hours	294	295	370	401	452	457										
Total, worst case	109	390	54	724	1904	1237										
Sun reduction	0.39	0.42	0.44	0.51	0.55	0.59										
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00										
Wind dir. red.	0.69	0.69	0.68	0.68	0.68	0.68										
Total reduction	0.27	0.29	0.30	0.35	0.38	0.40										
Total, real	29	114	16	251	717	498										

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

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

Baron_SFA

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10/11/2017 10:32 AM / 8

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 542 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (461)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37	06:35 (T62) 06:02	06:25 (T91) 06:35	07:05 (T66) 07:07	06:43	16:22 (T35) 07:20
2	05:38	06:36 (T62) 06:03	06:26 (T91) 06:36	07:03 (T66) 07:08	06:45	16:23 (T35) 07:21
3	05:38	06:35 (T62) 06:04	06:27 (T91) 06:37	07:02 (T66) 07:09	06:46	16:24 (T35) 07:22
4	05:39	06:36 (T62) 06:05	06:28 (T91) 06:38	07:00 (T66) 07:10	06:47	16:24 (T35) 07:23
5	05:39	06:36 (T62) 06:07	06:29 (T91) 06:39	07:00 (T66) 07:12	06:48	16:26 (T35) 07:24
6	05:40	06:35 (T62) 06:08	06:30 (T62) 06:40	07:01 (T66) 07:13	06:50	16:27 (T35) 07:25
7	05:41	06:35 (T62) 06:09	06:31 (T62) 06:41	07:02 (T66) 07:14	06:51	16:35 (T35) 07:26
8	05:41	06:34 (T62) 06:10	06:32 (T62) 06:43	07:03 (T66) 07:15	06:52	16:29 (T35) 07:26
9	05:42	06:34 (T62) 06:11	06:33 (T62) 06:44	07:04 (T66) 07:16	06:53	16:30 (T35) 07:27
10	05:43	06:34 (T62) 06:12	06:34 (T62) 06:45	07:05 (T66) 07:17	06:55	16:31 (T35) 07:28
11	05:43	06:33 (T62) 06:13	06:35 (T62) 06:46	07:06 (T66) 07:18	06:56	16:32 (T35) 07:29
12	05:44	06:33 (T62) 06:14	06:36 (T62) 06:47	07:07 (T66) 07:19	06:57	16:33 (T35) 07:30
13	05:45	06:33 (T62) 06:15	06:37 (T62) 06:48	07:08 (T66) 07:21	06:58	16:34 (T35) 07:31
14	05:46	06:33 (T62) 06:16	06:38 (T62) 06:49	07:09 (T66) 07:22	07:00	16:35 (T35) 07:32
15	05:47	06:32 (T91) 06:17	06:39 (T62) 06:50	07:10 (T66) 07:23	07:01	16:36 (T35) 07:33
16	05:47	06:28 (T91) 06:18	06:40 (T62) 06:51	07:11 (T66) 07:24	07:02	16:37 (T35) 07:34
17	05:48	06:27 (T91) 06:19	06:41 (T62) 06:52	07:12 (T66) 07:25	07:03	16:38 (T35) 07:35
18	05:49	06:26 (T91) 06:20	06:42 (T62) 06:53	07:13 (T66) 07:26	07:05	16:39 (T35) 07:36
19	05:50	06:25 (T91) 06:21	06:43 (T62) 06:54	07:14 (T66) 07:27	07:06	16:40 (T35) 07:37
20	05:51	06:24 (T91) 06:22	06:44 (T62) 06:55	07:15 (T66) 07:28	07:07	16:41 (T35) 07:38
21	05:52	06:23 (T91) 06:23	06:45 (T62) 06:56	07:16 (T66) 07:29	07:08	16:42 (T35) 07:39
22	05:53	06:22 (T91) 06:24	06:46 (T62) 06:57	07:17 (T66) 07:30	07:09	16:43 (T35) 07:40
23	05:54	06:21 (T91) 06:25	06:47 (T62) 06:58	07:18 (T66) 07:31	07:10	16:44 (T35) 07:41
24	05:54	06:21 (T91) 06:27	06:48 (T62) 07:00	07:19 (T66) 07:32	07:11	16:45 (T35) 07:42
25	05:55	06:20 (T91) 06:28	06:49 (T62) 07:01	07:20 (T66) 07:33	07:12	16:46 (T35) 07:43
26	05:56	06:20 (T91) 06:29	06:50 (T62) 07:02	07:21 (T66) 07:34	07:13	16:47 (T35) 07:44
27	05:57	06:20 (T91) 06:30	06:51 (T62) 07:03	07:22 (T66) 07:35	07:14	16:48 (T35) 07:45
28	05:58	06:21 (T91) 06:31	06:52 (T62) 07:04	07:23 (T66) 07:36	07:15	16:49 (T35) 07:46
29	05:59	06:22 (T91) 06:32	06:53 (T62) 07:05	07:24 (T66) 07:37	07:16	16:50 (T35) 07:47
30	06:00	06:23 (T91) 06:33	06:54 (T62) 07:06	07:25 (T66) 07:38	07:17	16:51 (T35) 07:48
31	06:01	06:24 (T91) 06:34	06:55 (T62) 07:07	07:26 (T66) 07:39	07:18	16:52 (T35) 07:49
Potential sun hours	464	431	375	343	294	283
Total, worst case	1747	1181	302	310	86	528
Sun reduction	0.64	0.91	0.53	0.45	0.29	0.28
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.68	0.68	0.68	0.69	0.69	0.69
Total reduction	0.44	0.62	0.36	0.31	0.20	0.19
Total, real	765	735	108	97	17	102

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

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

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10/11/2017 10:32 AM / 9

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 544 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (462)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	07:25	16:38 (T35) 06:48	06:55	07:14 (T62) 06:07	06:27 (T91) 05:37
	16:48	17:24	21 16:59 (T35) 18:00	19:36	25 07:39 (T66) 20:09	69 07:36 (T62) 20:40
2	07:41	07:24	16:38 (T35) 06:46	06:53	07:12 (T62) 06:06	06:26 (T91) 05:36
	16:49	17:25	22 17:00 (T35) 18:01	19:37	25 07:37 (T66) 20:10	69 07:35 (T62) 20:41
3	07:41	07:23	16:38 (T35) 06:44	06:51	07:11 (T62) 06:04	06:24 (T91) 05:36
	16:50	17:27	24 17:02 (T35) 18:02	19:38	26 07:37 (T62) 20:11	69 07:33 (T62) 20:42
4	07:41	07:22	16:38 (T35) 06:43	06:50	07:09 (T62) 06:03	06:23 (T91) 05:35
	16:51	17:28	25 17:03 (T35) 18:04	19:39	30 07:39 (T62) 20:12	67 07:32 (T62) 20:42
5	07:41	07:21	16:39 (T35) 06:41	06:48	07:07 (T62) 06:02	06:23 (T91) 05:35
	16:52	17:29	26 17:05 (T35) 18:05	19:41	33 07:40 (T62) 20:13	64 07:31 (T62) 20:43
6	07:41	07:20	16:39 (T35) 06:39	06:46	07:05 (T62) 06:00	06:23 (T91) 05:35
	16:53	17:31	28 17:07 (T35) 18:06	19:42	35 07:40 (T62) 20:14	62 07:30 (T62) 20:44
7	07:40	07:19	16:39 (T35) 06:38	06:44	07:04 (T62) 05:59	06:24 (T91) 05:34
	16:54	17:32	28 17:07 (T35) 18:07	19:43	38 07:42 (T62) 20:15	57 07:29 (T62) 20:45
8	07:40	07:18	16:40 (T35) 07:36	06:43	07:02 (T62) 05:58	06:24 (T91) 05:34
	16:55	17:33	27 17:07 (T35) 19:08	19:44	41 07:43 (T62) 20:17	52 07:26 (T62) 20:45
9	07:40	07:16	16:40 (T35) 07:34	06:41	07:00 (T62) 05:57	06:25 (T91) 05:34
	16:56	17:34	27 17:07 (T35) 19:10	19:45	43 07:43 (T62) 20:18	46 07:24 (T62) 20:46
10	07:40	07:15	16:42 (T35) 07:33	06:39	06:59 (T62) 05:56	06:27 (T91) 05:34
	16:57	17:36	25 17:07 (T35) 19:11	19:46	45 07:44 (T62) 20:19	38 07:22 (T62) 20:46
11	07:40	07:14	16:42 (T35) 07:31	06:38	06:57 (T62) 05:54	06:28 (T91) 05:33
	16:58	17:37	23 17:05 (T35) 19:12	19:47	47 07:44 (T62) 20:20	29 07:19 (T62) 20:47
12	07:39	07:13	16:43 (T35) 07:29	06:36	06:55 (T62) 05:53	06:31 (T91) 05:33
	16:59	17:38	21 17:04 (T35) 19:13	19:48	49 07:44 (T62) 20:21	9 06:40 (T91) 20:48
13	07:39	07:11	16:45 (T35) 07:28	06:34	06:54 (T62) 05:52	05:33
	17:00	17:40	18 17:03 (T35) 19:14	19:50	51 07:45 (T62) 20:22	20:48
14	07:39	07:10	16:47 (T35) 07:26	06:33	06:52 (T62) 05:51	05:33
	17:01	17:41	13 17:00 (T35) 19:15	19:51	52 07:44 (T62) 20:23	20:49
15	07:38	07:09	16:51 (T35) 07:24	06:31	06:51 (T62) 05:50	05:33
	17:03	17:42	6 16:57 (T35) 19:17	19:52	54 07:45 (T62) 20:24	20:49
16	07:38	07:07	07:22	06:30	06:49 (T62) 05:49	05:33
	17:04	17:44	19:18	19:53	56 07:45 (T62) 20:25	20:49
17	07:37	07:06	07:21	06:28	06:47 (T62) 05:48	05:33
	17:05	17:45	19:19	19:54	57 07:44 (T62) 20:26	20:50
18	07:37	07:04	07:19	06:26	06:47 (T62) 05:47	05:33
	17:06	17:46	19:20	19:55	57 07:44 (T62) 20:27	20:50
19	07:36	07:03	07:17	06:25	06:46 (T62) 05:46	05:33
	17:07	17:47	19:21	3 07:40 (T66) 19:56	58 07:44 (T62) 20:28	20:51
20	07:35	07:01	07:16	06:23	06:43 (T91) 05:45	05:33
	17:09	17:49	19:22	6 07:41 (T66) 19:57	58 07:44 (T62) 20:29	20:51
21	07:35	07:00	07:14	06:22	06:41 (T91) 05:44	05:34
	17:10	17:50	19:24	9 07:42 (T66) 19:59	62 07:43 (T62) 20:30	20:51
22	07:34	06:58	07:12	06:20	06:40 (T91) 05:43	05:34
	17:11	17:51	19:25	12 07:43 (T66) 20:00	63 07:43 (T62) 20:31	20:51
23	07:33	16:46 (T35) 06:57	07:10	06:19	06:38 (T91) 05:43	05:34
	17:12	1 16:47 (T35) 17:52	19:26	14 07:44 (T66) 20:00	64 07:42 (T62) 20:32	20:52
24	07:33	16:44 (T35) 06:55	07:09	06:17	06:37 (T91) 05:42	05:34
	17:14	4 16:48 (T35) 17:54	19:27	16 07:44 (T66) 20:01	65 07:42 (T62) 20:33	20:52
25	07:32	16:42 (T35) 06:54	07:07	06:16	06:35 (T91) 05:41	05:35
	17:15	7 16:49 (T35) 17:55	19:28	18 07:44 (T66) 20:02	66 07:41 (T62) 20:34	20:52
26	07:31	16:41 (T35) 06:52	07:05	06:14	06:34 (T91) 05:40	05:35
	17:16	10 16:51 (T35) 17:56	19:29	20 07:44 (T66) 20:03	67 07:41 (T62) 20:35	20:52
27	07:30	16:40 (T35) 06:51	07:03	06:13	06:33 (T91) 05:40	05:35
	17:17	12 16:52 (T35) 17:57	19:30	21 07:44 (T66) 20:04	67 07:40 (T62) 20:36	20:52
28	07:29	16:39 (T35) 06:49	07:02	06:11	06:31 (T91) 05:39	05:36
	17:19	14 16:53 (T35) 17:59	19:31	22 07:43 (T66) 20:05	68 07:39 (T62) 20:37	20:52
29	07:28	16:39 (T35) 06:49	07:00	06:10	06:30 (T91) 05:38	05:36
	17:20	16 16:55 (T35) 17:59	19:33	23 07:42 (T66) 20:07	68 07:38 (T62) 20:38	20:52
30	07:27	16:38 (T35) 06:48	06:58	06:08	06:28 (T91) 05:38	05:37
	17:21	18 16:56 (T35) 17:59	19:34	24 07:41 (T66) 20:08	69 07:37 (T62) 20:38	20:52
31	07:26	16:38 (T35) 06:47	06:56	06:07	06:27 (T91) 05:37	05:37
	17:23	19 16:57 (T35) 17:59	19:35	25 07:41 (T66) 20:08	69 07:37 (T62) 20:38	20:52
Potential sun hours	294	295	370	401	452	457
Total, worst case	101	334	213	1539	631	
Sun reduction	0.39	0.42	0.44	0.51	0.55	
Oper. time red.	1.00	1.00	1.00	1.00	1.00	
Wind dir. red.	0.70	0.70	0.67	0.68	0.68	
Total reduction	0.27	0.29	0.30	0.35	0.37	
Total, real	27	98	63	533	236	

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

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

Project:
Baron_SFA

Printed/Page
10/11/2017 10:32 AM / 10

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 544 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (462)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December	
1 05:37	06:02	06:40 (T91) 06:35	06:56 (T62) 07:07	06:43	16:10 (T35) 07:20	
20:52	20:33	19 07:26 (T62) 19:46	47 07:43 (T62) 18:54	17:05	25 16:35 (T35) 16:39	
2 05:38	06:03	06:38 (T91) 06:36	06:57 (T62) 07:08	06:45	16:10 (T35) 07:21	
20:52	20:31	34 07:31 (T62) 19:45	45 07:42 (T62) 18:52	17:04	27 16:37 (T35) 16:39	
3 05:38	06:04	06:37 (T91) 06:37	06:58 (T62) 07:09	06:46	16:09 (T35) 07:22	
20:52	20:30	40 07:33 (T62) 19:43	43 07:41 (T62) 18:50	17:02	28 16:37 (T35) 16:39	
4 05:39	06:05	06:35 (T91) 06:38	06:59 (T62) 07:10	06:47	16:09 (T35) 07:23	
20:52	20:29	49 07:36 (T62) 19:41	41 07:40 (T62) 18:48	17:01	28 16:37 (T35) 16:38	
5 05:39	06:07	06:34 (T91) 06:39	07:00 (T62) 07:12	06:48	16:09 (T35) 07:24	
20:51	20:28	54 07:37 (T62) 19:39	38 07:38 (T62) 18:47	17:00	27 16:36 (T35) 16:38	
6 05:40	06:08	06:33 (T91) 06:40	07:01 (T62) 07:13	06:50	16:09 (T35) 07:25	
20:51	20:27	59 07:39 (T62) 19:38	36 07:37 (T62) 18:45	16:59	26 16:35 (T35) 16:38	
7 05:41	06:09	06:33 (T91) 06:41	07:02 (T62) 07:14	06:51	16:08 (T35) 07:26	
20:51	20:25	62 07:40 (T62) 19:36	33 07:35 (T62) 18:43	16:58	25 16:33 (T35) 16:38	
8 05:41	06:10	06:32 (T91) 06:43	07:03 (T62) 07:15	06:52	16:09 (T35) 07:27	
20:50	20:24	66 07:41 (T62) 19:34	30 07:33 (T62) 18:42	16:57	24 16:33 (T35) 16:38	
9 05:42	06:11	06:33 (T91) 06:44	07:04 (T62) 07:16	06:53	16:09 (T35) 07:28	
20:50	20:23	67 07:42 (T62) 19:32	26 07:30 (T62) 18:40	16:55	22 16:31 (T35) 16:38	
10 05:43	06:12	06:34 (T91) 06:45	07:05 (T62) 07:17	06:55	16:09 (T35) 07:29	
20:50	20:22	68 07:43 (T62) 19:31	25 07:30 (T66) 18:38	16:54	21 16:30 (T35) 16:38	
11 05:43	06:13	06:35 (T91) 06:46	07:06 (T62) 07:18	06:56	16:10 (T35) 07:30	
20:49	20:20	69 07:44 (T62) 19:29	25 07:31 (T66) 18:37	16:53	19 16:29 (T35) 16:38	
12 05:44	06:14	06:36 (T91) 06:47	07:07 (T62) 07:19	06:57	16:10 (T35) 07:30	
20:49	20:19	69 07:45 (T62) 19:27	25 07:32 (T66) 18:35	16:52	18 16:28 (T35) 16:38	
13 05:45	06:15	06:37 (T91) 06:48	07:08 (T66) 07:21	06:58	16:11 (T35) 07:31	
20:48	20:17	69 07:46 (T62) 19:25	24 07:32 (T66) 18:33	16:51	15 16:26 (T35) 16:38	
14 05:46	06:16	06:38 (T91) 06:49	07:09 (T66) 07:22	07:00	16:12 (T35) 07:32	
20:48	20:16	68 07:46 (T62) 19:24	24 07:33 (T66) 18:32	16:50	14 16:26 (T35) 16:38	
15 05:47	06:17	06:39 (T91) 06:50	07:10 (T66) 07:23	07:01	16:13 (T35) 07:33	
20:47	20:15	68 07:47 (T62) 19:22	23 07:33 (T66) 18:30	16:49	12 16:25 (T35) 16:39	
16 05:47	06:18	06:40 (T91) 06:51	07:11 (T66) 07:24	07:02	16:14 (T35) 07:34	
20:47	20:13	67 07:47 (T62) 19:20	21 07:32 (T66) 18:28	16:48	9 16:23 (T35) 16:39	
17 05:48	06:19	06:41 (T91) 06:52	07:12 (T66) 07:25	07:03	16:16 (T35) 07:34	
20:46	20:12	66 07:47 (T62) 19:18	20 07:32 (T66) 18:27	16:48	7 16:23 (T35) 16:39	
18 05:49	06:20	06:42 (T91) 06:53	07:14 (T66) 07:26	07:05	16:18 (T35) 07:35	
20:45	20:10	66 07:48 (T62) 19:17	18 07:32 (T66) 18:25	16:47	4 16:22 (T35) 16:40	
19 05:50	06:21	06:43 (T91) 06:54	07:15 (T66) 07:28	07:06	16:20 (T35) 07:36	
20:45	20:09	65 07:48 (T62) 19:15	17 07:32 (T66) 18:24	16:46	1 16:21 (T35) 16:40	
20 05:51	06:22	06:44 (T91) 06:55	07:16 (T66) 07:29	07:07	07:36	
20:44	20:07	64 07:48 (T62) 19:13	15 07:31 (T66) 18:22	16:45	16:40	
21 05:52	06:23	06:45 (T91) 06:56	07:17 (T66) 07:30	07:08	07:37	
20:43	20:06	63 07:48 (T62) 19:11	13 07:30 (T66) 18:21	16:45	16:41	
22 05:53	06:24	06:46 (T91) 06:57	07:18 (T66) 07:31	07:10	07:37	
20:42	20:04	61 07:48 (T62) 19:09	10 07:28 (T66) 18:19	16:44	16:41	
23 05:54	06:26	06:50 (T62) 06:58	07:19 (T66) 07:32	07:11	07:38	
20:41	20:03	58 07:48 (T62) 19:08	7 07:26 (T66) 18:18	16:43	16:42	
24 05:54	06:27	06:50 (T62) 07:00	07:20 (T66) 07:34	07:12	07:38	
20:41	20:01	58 07:48 (T62) 19:06	4 07:24 (T66) 18:16	16:43	16:42	
25 05:55	06:28	06:50 (T62) 07:01	07:35	07:13	07:39	
20:40	19:58	57 07:47 (T62) 19:04	18:15	16:42	16:43	
26 05:56	06:29	06:50 (T62) 07:02	07:36	07:14	07:39	
20:39	19:56	57 07:47 (T62) 19:02	18:13	16:41	16:44	
27 05:57	06:30	06:51 (T62) 07:03	07:37	07:15	07:39	
20:38	19:55	56 07:47 (T62) 19:01	18:12	8 17:28 (T35) 16:41	16:44	
28 05:58	06:31	06:52 (T62) 07:04	07:39	07:17	07:40	
20:37	19:53	54 07:46 (T62) 18:59	18:10	15 17:31 (T35) 16:40	16:45	
29 05:59	06:32	06:53 (T62) 07:05	07:40	07:18	07:40	
20:36	19:51	52 07:45 (T62) 18:57	18:09	18 17:32 (T35) 16:40	16:46	
30 06:00	06:33	06:54 (T62) 07:06	07:41	07:19	07:40	
20:35	19:50	51 07:45 (T62) 18:55	18:08	21 17:34 (T35) 16:40	16:46	
31 06:01	06:44 (T91) 06:34	06:55 (T62)	07:42	17:11 (T35)	07:40	
20:34	4 06:48 (T91) 19:48	49 07:44 (T62)	18:06	24 17:35 (T35)	16:47	
Potential sun hours	464	431	375	343	294	283
Total, worst case	4	1805	610	86	352	
Sun reduction	0.64	0.91	0.53	0.45	0.29	
Oper. time red.	1.00	1.00	1.00	1.00	1.00	
Wind dir. red.	0.68	0.68	0.68	0.70	0.70	
Total reduction	0.44	0.62	0.36	0.31	0.20	
Total, real	2	1117	219	27	71	

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

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

Baron_SFA

Printed/Page

10/11/2017 10:32 AM / 11

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 547 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (463)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1 07:40	15:59 (T79) 07:25		06:48	07:07 (T64) 06:55	06:07	
16:48	23 16:22 (T79) 17:24		18:00	45 07:52 (T64) 19:36	20:09	06:54 (T75)
2 07:40	16:00 (T79) 07:24		06:46	07:06 (T64) 06:53	06:06	8 07:02 (T75)
16:49	23 16:23 (T79) 17:25		18:01	47 07:53 (T64) 19:37	20:10	
3 07:41	16:00 (T79) 07:23		06:44	07:04 (T64) 06:51	06:04	
16:50	24 16:24 (T79) 17:27		18:02	49 07:53 (T64) 19:38	20:11	
4 07:41	16:01 (T79) 07:22		06:43	07:02 (T64) 06:49	06:03	
16:51	24 16:25 (T79) 17:28		18:03	51 07:53 (T64) 19:39	20:12	
5 07:41	16:00 (T79) 07:21		06:41	07:01 (T64) 06:48	06:02	
16:52	25 16:25 (T79) 17:29		18:05	52 07:53 (T64) 19:40	20:13	
6 07:40	16:01 (T79) 07:20		06:39	07:01 (T64) 06:46	06:00	
16:53	25 16:26 (T79) 17:30		18:06	52 07:53 (T64) 19:42	20:14	
7 07:40	16:02 (T79) 07:19		06:38	07:00 (T64) 06:44	05:59	
16:54	25 16:27 (T79) 17:32		18:07	52 07:52 (T64) 19:43	20:15	
8 07:40	16:03 (T79) 07:18		07:36	08:01 (T64) 06:43	05:58	
16:55	25 16:28 (T79) 17:33		19:08	52 08:53 (T64) 19:44	20:16	
9 07:40	16:04 (T79) 07:16		07:34	08:00 (T64) 06:41	05:57	
16:56	25 16:29 (T79) 17:34		19:09	52 08:52 (T64) 19:45	20:18	
10 07:40	16:04 (T79) 07:15		07:33	08:00 (T64) 06:39	05:55	
16:57	24 16:28 (T79) 17:36		19:11	51 08:51 (T64) 19:46	20:19	
11 07:40	16:05 (T79) 07:14		07:31	08:01 (T64) 06:38	05:54	
16:58	24 16:29 (T79) 17:37		19:12	50 08:51 (T64) 19:47	20:20	
12 07:39	16:06 (T79) 07:13		07:29	08:01 (T64) 06:36	05:53	
16:59	23 16:29 (T79) 17:38		19:13	49 08:50 (T64) 19:48	20:21	
13 07:39	16:06 (T79) 07:11		07:28	08:01 (T64) 06:34	05:52	
17:00	22 16:28 (T79) 17:40		19:14	47 08:48 (T64) 19:50	20:22	
14 07:38	16:07 (T79) 07:10		07:26	08:01 (T64) 06:33	05:51	
17:01	22 16:29 (T79) 17:41		19:15	46 08:47 (T64) 19:51	20:23	
15 07:38	16:08 (T79) 07:09		07:24	08:03 (T64) 06:31	05:50	
17:03	20 16:28 (T79) 17:42		19:17	44 08:47 (T64) 19:52	20:24	
16 07:38	16:10 (T79) 07:07		07:22	08:03 (T64) 06:29	06:55 (T75) 05:49	
17:04	18 16:28 (T79) 17:43		19:18	42 08:45 (T64) 19:53	13 07:08 (T75) 20:25	
17 07:37	16:10 (T79) 07:06		07:21	08:04 (T64) 06:28	06:50 (T75) 05:48	
17:05	17 16:27 (T79) 17:45	5 07:32 (T64) 19:19	39 08:43 (T64) 19:54	21 07:11 (T75) 20:26	42 07:18 (T75) 20:50	
18 07:37	16:12 (T79) 07:04		07:24 (T64) 07:19	08:05 (T64) 06:26	06:48 (T75) 05:47	
17:06	14 16:26 (T79) 17:46	14 07:38 (T64) 19:20	36 08:41 (T64) 19:55	26 07:14 (T75) 20:27	41 07:17 (T75) 20:50	
19 07:36	16:14 (T79) 07:03		07:23 (T64) 07:17	08:07 (T64) 06:25	06:45 (T75) 05:46	
17:07	11 16:25 (T79) 17:47	18 07:41 (T64) 19:21	33 08:40 (T64) 19:56	31 07:16 (T75) 20:28	40 07:17 (T75) 20:50	
20 07:35	16:17 (T79) 07:01		07:21 (T64) 07:15	08:08 (T64) 06:23	06:44 (T75) 05:45	
17:09	5 16:22 (T79) 17:49	22 07:43 (T64) 19:22	29 08:37 (T64) 19:57	34 07:18 (T75) 20:29	39 07:16 (T75) 20:51	
21 07:35	17:00		07:20 (T64) 07:14	08:10 (T64) 06:22	06:42 (T75) 05:44	
17:10	17:50	26 07:46 (T64) 19:23	24 08:34 (T64) 19:59	36 07:18 (T75) 20:30	37 07:16 (T75) 20:51	
22 07:34	06:58		07:18 (T64) 07:12	08:13 (T64) 06:20	06:41 (T75) 05:43	
17:11	17:51	29 07:47 (T64) 19:25	17 08:30 (T64) 20:00	39 07:20 (T75) 20:31	35 07:15 (T75) 20:51	
23 07:33	06:57		07:17 (T64) 07:10	08:18	06:39 (T75) 05:43	
17:12	17:52	31 07:48 (T64) 19:26		20:00	41 07:20 (T75) 20:32	
24 07:33	06:55		07:15 (T64) 07:09	08:17	06:38 (T75) 05:42	
17:14	17:54	34 07:49 (T64) 19:27		20:01	43 07:21 (T75) 20:33	
25 07:32	06:54		07:14 (T64) 07:07	08:15	06:37 (T75) 05:41	
17:15	17:55	37 07:51 (T64) 19:28		20:02	45 07:22 (T75) 20:34	
26 07:31	06:52		07:12 (T64) 07:05	08:14	06:36 (T75) 05:40	
17:16	17:56	39 07:51 (T64) 19:29		20:03	46 07:22 (T75) 20:35	
27 07:30	06:51		07:11 (T64) 07:03	08:13	06:35 (T75) 05:40	
17:17	17:57	41 07:52 (T64) 19:30		20:04	47 07:22 (T75) 20:36	
28 07:29	06:49		07:09 (T64) 07:02	08:11	06:35 (T75) 05:39	
17:19	17:59	43 07:52 (T64) 19:31		20:05	48 07:23 (T75) 20:37	
29 07:28			07:00	08:10	06:34 (T75) 05:38	
17:20			19:33	20:06	49 07:23 (T75) 20:37	
30 07:27			06:58	08:08	06:33 (T75) 05:38	
17:21			19:34	20:08	50 07:23 (T75) 20:38	
31 07:26			06:56		05:37	
17:23			19:35		20:39	
Potential sun hours	294	295	370	401	452	457
Total, worst case	419	339	959	569	1234	8
Sun reduction	0.39	0.42	0.44	0.51	0.55	0.59
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.69	0.65	0.65	0.68	0.68	0.68
Total reduction	0.27	0.27	0.29	0.34	0.37	0.40
Total, real	112	93	274	196	458	3

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

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

Project:
Baron_SFA

Printed/Page
10/11/2017 10:32 AM / 12

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 547 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (463)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December
1 05:37 20:52	06:02 48 07:32 (T75) 19:46	06:44 (T75) 06:35 07:07	07:07 18:54 48 07:40 (T64) 06:43	06:43 17:05	07:20 24 15:47 (T79)
2 05:38 20:52	06:03 48 07:32 (T75) 19:44	06:44 (T75) 06:36 07:08	07:08 18:52 49 07:39 (T64) 06:45	06:45 17:04	07:21 24 15:47 (T79)
3 05:38 20:52	06:04 49 07:32 (T75) 19:43	06:43 (T75) 06:37 07:09	07:09 18:50 50 07:39 (T64) 06:46	06:46 17:02	07:22 25 15:47 (T79)
4 05:39 20:51	06:05 50 07:33 (T75) 19:41	06:43 (T75) 06:38 07:10	07:10 18:48 51 07:38 (T64) 06:47	06:47 17:01	07:23 25 15:47 (T79)
5 05:39 20:51	06:06 50 07:33 (T75) 19:39	06:42 (T75) 06:39 07:12	07:12 18:47 52 07:37 (T64) 06:48	06:48 17:00	07:24 25 15:47 (T79)
6 05:40 20:51	06:07 51 07:33 (T75) 19:38	06:42 (T75) 06:40 07:13	07:13 18:45 52 07:36 (T64) 06:50	06:50 16:59	07:25 25 15:47 (T79)
7 05:41 20:51	06:09 51 07:33 (T75) 19:36	06:42 (T75) 06:41 07:14	07:14 18:43 53 07:36 (T64) 06:51	06:51 16:58	07:26 24 15:48 (T79)
8 05:41 20:50	06:10 51 07:33 (T75) 19:34	06:42 (T75) 06:42 07:15	07:15 18:42 52 07:36 (T64) 06:52	06:52 16:57	07:27 24 15:48 (T79)
9 05:42 20:50	06:11 51 07:33 (T75) 19:32	06:42 (T75) 06:44 07:16	07:16 18:40 52 07:36 (T64) 06:53	06:53 16:56	07:28 24 15:48 (T79)
10 05:43 20:50	06:12 51 07:33 (T75) 19:31	06:42 (T75) 06:45 07:17	07:17 18:38 50 07:38 (T64) 06:55	06:55 16:55	07:29 24 15:49 (T79)
11 05:43 20:49	07:04 (T75) 06:13 50 07:32 (T75) 19:29	06:42 (T75) 06:46 07:18	07:18 18:37 48 07:39 (T64) 06:56	06:56 16:54	07:30 23 15:49 (T79)
12 05:44 20:49	07:00 (T75) 06:14 50 07:32 (T75) 19:27	06:42 (T75) 06:47 07:19	07:19 18:35 46 07:40 (T64) 06:57	06:57 16:53	07:31 22 15:50 (T79)
13 05:45 20:48	07:11 (T75) 06:15 50 07:32 (T75) 19:25	06:42 (T75) 06:48 07:21	07:21 18:35 46 07:41 (T64) 06:58	06:58 16:52	07:32 22 15:50 (T79)
14 05:46 20:48	06:59 (T75) 06:16 49 07:31 (T75) 19:24	06:42 (T75) 06:49 07:22	07:22 18:33 45 07:42 (T64) 06:59	06:59 16:51	07:33 21 15:50 (T79)
15 05:46 20:47	07:14 (T75) 06:17 49 07:31 (T75) 19:22	06:42 (T75) 06:50 07:23	07:23 18:32 43 07:44 (T64) 07:01	07:01 16:50	07:34 22 15:51 (T79)
16 05:47 20:47	06:55 (T75) 06:18 48 07:30 (T75) 19:22	06:42 (T75) 06:51 07:24	07:24 18:30 40 07:45 (T64) 07:02	07:02 16:49	07:35 21 15:52 (T79)
17 05:47 20:47	06:54 (T75) 06:18 47 07:30 (T75) 19:20	06:43 (T75) 06:51 07:25	07:25 18:28 38 07:46 (T64) 07:03	07:03 16:48	07:36 21 15:52 (T79)
18 05:48 20:46	06:53 (T75) 06:19 46 07:29 (T75) 19:18	06:43 (T75) 06:52 07:26	07:26 18:27 36 07:47 (T64) 07:04	07:04 16:47	07:37 20 15:53 (T79)
19 05:49 20:45	06:53 (T75) 06:20 44 07:28 (T75) 19:17	06:44 (T75) 06:53 07:27	07:27 18:25 33 07:48 (T64) 07:05	07:05 16:46	07:38 21 15:53 (T79)
20 05:50 20:44	06:52 (T75) 06:21 43 07:27 (T75) 19:15	06:44 (T75) 06:54 07:28	07:28 18:24 31 07:49 (T64) 07:06	07:06 16:45	07:39 21 15:53 (T79)
21 05:51 20:44	06:51 (T75) 06:22 41 07:26 (T75) 19:13	06:45 (T75) 06:55 07:29	07:29 18:22 28 07:50 (T64) 07:07	07:07 16:44	07:40 20 15:54 (T79)
22 05:52 20:43	06:50 (T75) 06:23 39 07:25 (T75) 19:11	06:46 (T75) 06:56 07:30	07:30 18:21 25 07:51 (T64) 07:08	07:08 16:43	07:41 20 15:54 (T79)
23 05:53 20:42	06:49 (T75) 06:24 36 07:25 (T75) 19:09	06:47 (T75) 06:57 07:31	07:31 18:19 21 07:52 (T64) 07:09	07:09 16:42	07:42 20 15:54 (T79)
24 05:53 20:41	06:48 (T75) 06:25 33 07:24 (T75) 19:08	06:48 (T75) 06:58 07:32	07:32 18:18 17 07:53 (T64) 07:10	07:10 16:41	07:43 20 15:54 (T79)
25 05:54 20:40	06:48 (T75) 06:26 30 07:23 (T75) 19:06	06:49 (T75) 06:59 07:33	07:33 18:16 12 07:54 (T64) 07:11	07:11 16:40	07:44 21 15:55 (T79)
26 05:55 20:40	06:47 (T75) 06:27 26 07:22 (T75) 19:04	06:50 (T75) 07:00 07:34	07:34 18:15 8 07:55 (T64) 07:12	07:12 16:39	07:45 21 15:55 (T79)
27 05:56 20:39	06:47 (T75) 06:28 20 07:21 (T75) 19:02	06:51 (T75) 07:01 07:35	07:35 18:13 4 07:56 (T64) 07:13	07:13 16:38	07:46 21 15:56 (T79)
28 05:57 20:38	06:46 (T75) 06:29 11 07:20 (T75) 19:01	06:52 (T75) 07:02 07:36	07:36 18:12 1 07:57 (T64) 07:14	07:14 16:37	07:47 20 15:57 (T79)
29 05:58 20:37	06:46 (T75) 06:30 4 07:19 (T75) 18:59	07:03 07:37	07:37 18:10 1 07:58 (T64) 07:15	07:15 16:36	07:48 21 15:57 (T79)
30 06:00 20:36	06:45 (T75) 06:31 45 07:18 (T75) 18:57	07:04 07:38	07:38 18:09 1 07:59 (T64) 07:16	07:16 16:35	07:49 21 15:58 (T79)
31 06:01 20:35	06:45 (T75) 06:32 46 07:17 (T75) 18:55	07:05 07:39	07:39 18:08 1 08:00 (T64) 07:17	07:17 16:34	07:50 22 15:58 (T79)
Potential sun hours 464	431	375	343	294	283
Total, worst case 668	1163	346	972	151	684
Sun reduction 0.64	0.91	0.53	0.45	0.29	0.28
Oper. time red. 1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red. 0.68	0.68	0.65	0.65	0.69	0.69
Total reduction 0.43	0.61	0.34	0.29	0.20	0.19
Total, real 289	714	119	285	30	132

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

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

Project:
Baron_SFA

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10/11/2017 10:32 AM / 13

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 561 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (467)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	08:55 (T79) 07:25	07:58 (T76) 06:48		06:07	19:07 (T35) 05:37
	16:48	09:45 (T79) 17:24	08:17 (T76) 18:00		19:36	20:09
2	07:41	08:56 (T79) 07:24	07:59 (T76) 06:46		06:06	19:07 (T35) 05:36
	16:49	09:45 (T79) 17:25	08:16 (T76) 18:01		19:37	20:10
3	07:41	08:57 (T79) 07:23	08:01 (T76) 06:44		06:04	19:06 (T35) 05:36
	16:50	09:45 (T79) 17:27	08:15 (T76) 18:02		19:38	20:11
4	07:41	08:58 (T79) 07:22	08:04 (T76) 06:43		06:03	19:05 (T35) 05:35
	16:51	09:45 (T79) 17:28	08:13 (T76) 18:04		19:39	20:12
5	07:41	08:57 (T79) 07:21	06:41		06:02	19:05 (T35) 05:35
	16:52	09:44 (T79) 17:29	18:05		19:41	20:13
6	07:41	08:58 (T79) 07:20	06:39		06:00	19:05 (T35) 05:35
	16:53	09:44 (T79) 17:31	18:06		19:42	20:14
7	07:40	08:59 (T79) 07:19	06:38		05:59	19:05 (T35) 05:34
	16:54	09:44 (T79) 17:32	18:07		19:43	20:15
8	07:40	09:00 (T79) 07:18	07:36	18:29 (T40)	06:43	19:04 (T35) 05:34
	16:55	09:45 (T79) 17:33	19:08	9	18:38 (T40)	19:44
9	07:40	08:03 (T76) 07:16	07:34	18:24 (T40)	06:41	20:17
	16:56	09:45 (T79) 17:34	19:10	18	18:42 (T40)	19:45
10	07:40	08:02 (T76) 07:15	07:33	18:21 (T40)	06:39	20:18
	16:57	09:44 (T79) 17:36	19:11	23	18:44 (T40)	19:46
11	07:40	08:02 (T76) 07:14	07:31	18:20 (T40)	06:38	20:19
	16:58	09:44 (T79) 17:37	19:12	26	18:46 (T40)	19:47
12	07:39	08:02 (T76) 07:13	07:29	18:18 (T40)	06:36	20:20
	16:59	09:44 (T79) 17:38	19:13	29	18:47 (T40)	19:48
13	07:39	08:01 (T76) 07:11	07:28	18:16 (T40)	06:34	20:21
	17:00	09:43 (T79) 17:40	19:14	32	18:48 (T40)	19:50
14	07:39	08:01 (T76) 07:10	07:26	18:15 (T40)	06:33	20:22
	17:02	09:42 (T79) 17:41	19:15	33	18:48 (T40)	19:51
15	07:38	08:00 (T76) 07:09	07:24	18:15 (T40)	06:31	20:23
	17:03	09:41 (T79) 17:42	19:17	34	18:49 (T40)	19:52
16	07:38	08:00 (T76) 07:07	07:22	18:14 (T40)	06:30	20:24
	17:04	09:41 (T79) 17:44	19:18	35	18:49 (T40)	19:53
17	07:37	07:59 (T76) 07:06	07:21	18:13 (T40)	06:28	20:25
	17:05	09:39 (T79) 17:45	19:19	36	18:49 (T40)	19:54
18	07:37	07:58 (T76) 07:04	07:19	18:12 (T40)	06:26	20:26
	17:06	09:37 (T79) 17:46	19:20	37	18:49 (T40)	19:55
19	07:36	07:58 (T76) 07:03	07:17	18:12 (T40)	06:25	20:27
	17:07	09:36 (T79) 17:47	19:21	38	18:50 (T40)	19:56
20	07:35	07:57 (T76) 07:01	07:16	18:12 (T40)	06:23	20:28
	17:09	09:33 (T79) 17:49	19:22	37	18:49 (T40)	19:57
21	07:35	07:56 (T76) 07:00	07:14	18:11 (T40)	06:22	20:29
	17:10	09:32 (T79) 17:50	19:23	37	18:48 (T40)	19:58
22	07:34	07:56 (T76) 06:58	07:12	18:11 (T40)	06:20	20:30
	17:11	08:19 (T76) 17:51	19:25	37	18:48 (T40)	20:00
23	07:33	07:55 (T76) 06:57	07:10	18:12 (T40)	06:19	20:31
	17:12	08:19 (T76) 17:52	19:26	36	18:48 (T40)	20:00
24	07:33	07:54 (T76) 06:55	07:09	18:12 (T40)	06:17	20:32
	17:14	08:19 (T76) 17:54	19:27	34	18:46 (T40)	20:01
25	07:32	07:53 (T76) 06:54	07:07	18:12 (T40)	06:16	20:33
	17:15	08:19 (T76) 17:55	19:28	33	18:45 (T40)	20:02
26	07:31	07:54 (T76) 06:52	07:05	18:13 (T40)	06:14	20:34
	17:16	08:19 (T76) 17:56	19:29	31	18:44 (T40)	20:03
27	07:30	07:54 (T76) 06:51	07:03	18:14 (T40)	06:13	20:35
	17:17	08:19 (T76) 17:57	19:30	29	18:43 (T40)	20:04
28	07:29	07:54 (T76) 06:49	07:02	18:15 (T40)	06:11	20:36
	17:19	08:19 (T76) 17:59	19:31	26	18:41 (T40)	20:05
29	07:28	07:55 (T76)	07:00	18:16 (T40)	06:10	20:37
	17:20	08:19 (T76)	19:33	23	18:39 (T40)	20:06
30	07:27	07:56 (T76)	06:58	18:18 (T40)	06:08	20:38
	17:21	08:18 (T76)	19:34	18	18:36 (T40)	20:08
31	07:26	07:57 (T76)	06:56	18:22 (T40)	05:37	20:38
	17:23	08:18 (T76)	19:35	11	18:33 (T40)	20:39
Potential sun hours	294	295	370	401	452	457
Total, worst case	1165	59	702	149	715	
Sun reduction	0.39	0.42	0.44	0.51	0.55	
Oper. time red.	1.00	1.00	1.00	1.00	1.00	
Wind dir. red.	0.60	0.61	0.68	0.65	0.65	
Total reduction	0.23	0.25	0.29	0.33	0.35	
Total, real	270	15	207	49	253	

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

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

Project: Baron_SFA

Printed/Page: 10/11/2017 10:32 AM / 14

Licensed user: EDR 217 Montgomery St. US-SYRACUSE, NY 13202 (315) 471 0688

Calculated: 10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 561 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (467)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N-Sum) and 2 rows of operational time values.

Assumptions for shadow calculations

Main shadow calculation table with columns for months (July-December) and rows for sun rise/set times, operational time, and reduction factors.

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

Matrix defining table layout with columns for Day in month, Sun rise/set, Minutes with flicker, Last time with flicker, and WTG causing flicker.

Project:

Baron_SFA

Printed/Page

10/11/2017 10:32 AM / 15

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 564 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (468)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	07:40	08:25 (T79) 07:25	07:46 (T76) 06:48	06:55	18:14 (T40) 06:07	05:37	19:16 (T35)
2	07:41	08:25 (T79) 07:24	07:46 (T76) 06:46	06:53	18:14 (T40) 06:06	05:36	19:17 (T35)
3	07:41	08:26 (T79) 07:23	07:46 (T76) 06:44	06:51	18:16 (T40) 06:04	19:29 (T35) 05:36	19:17 (T35)
4	07:41	08:26 (T79) 07:22	07:47 (T76) 06:43	06:50	18:17 (T40) 06:03	19:24 (T35) 05:35	19:18 (T35)
5	07:41	08:26 (T79) 07:21	07:47 (T76) 06:41	06:48	18:18 (T40) 06:02	19:22 (T35) 05:35	19:18 (T35)
6	07:41	08:26 (T79) 07:20	07:48 (T76) 06:39	06:46	18:20 (T40) 06:00	19:20 (T35) 05:35	19:18 (T35)
7	07:40	08:27 (T79) 07:19	07:49 (T76) 06:38	06:44	18:24 (T40) 05:59	19:19 (T35) 05:34	19:19 (T35)
8	07:40	08:28 (T79) 07:18	07:50 (T76) 07:36	06:43	18:36 (T40) 05:58	19:17 (T35) 05:34	19:20 (T35)
9	07:40	08:29 (T79) 07:16	07:52 (T76) 07:34	06:41	20:17	19:16 (T35) 05:34	19:20 (T35)
10	07:40	08:28 (T79) 07:15	07:55 (T76) 07:33	06:39	20:18	19:15 (T35) 05:34	19:20 (T35)
11	07:40	08:29 (T79) 07:14	08:03 (T76) 07:31	06:38	20:19	19:15 (T35) 05:33	19:21 (T35)
12	07:39	08:30 (T79) 07:13	07:29	06:36	20:20	19:14 (T35) 05:33	19:21 (T35)
13	07:39	08:30 (T79) 07:11	07:28	06:34	20:21	19:14 (T35) 05:33	19:22 (T35)
14	07:39	08:31 (T79) 07:10	07:26	06:33	20:22	19:14 (T35) 05:33	19:22 (T35)
15	07:38	08:31 (T79) 07:09	07:24	06:31	20:23	19:13 (T35) 05:33	19:23 (T35)
16	07:38	08:32 (T79) 07:07	07:22	06:30	20:24	19:13 (T35) 05:33	19:23 (T35)
17	07:37	08:32 (T79) 07:06	07:21	06:28	20:25	19:13 (T35) 05:33	19:24 (T35)
18	07:37	08:32 (T79) 07:04	07:19	06:26	20:26	19:12 (T35) 05:33	19:24 (T35)
19	07:36	08:34 (T79) 07:03	07:17	06:25	20:27	19:12 (T35) 05:33	19:24 (T35)
20	07:35	08:34 (T79) 07:01	07:16	06:23	20:28	19:12 (T35) 05:34	19:25 (T35)
21	07:35	08:34 (T79) 07:00	07:14	06:22	20:29	19:13 (T35) 05:34	19:25 (T35)
22	07:34	08:34 (T79) 06:58	07:12	06:20	20:30	19:13 (T35) 05:34	19:25 (T35)
23	07:33	08:34 (T79) 06:57	07:10	06:19	20:31	19:13 (T35) 05:34	19:25 (T35)
24	07:33	08:34 (T79) 06:55	07:09	06:17	20:32	19:13 (T35) 05:34	19:26 (T35)
25	07:32	08:34 (T79) 06:54	07:07	06:16	20:33	19:14 (T35) 05:34	19:26 (T35)
26	07:31	08:34 (T79) 06:52	07:05	06:14	20:34	19:14 (T35) 05:35	19:26 (T35)
27	07:30	08:34 (T79) 06:51	07:03	06:13	20:35	19:14 (T35) 05:35	19:26 (T35)
28	07:29	08:34 (T79) 06:49	07:02	06:11	20:36	19:14 (T35) 05:36	19:26 (T35)
29	07:28	08:34 (T79) 06:48	07:00	06:10	20:37	19:14 (T35) 05:36	19:26 (T35)
30	07:27	08:34 (T79) 06:46	06:58	06:08	20:38	19:14 (T35) 05:36	19:26 (T35)
31	07:26	08:34 (T79) 06:45	06:56	06:06	20:39	19:15 (T35) 05:37	19:26 (T35)
Potential sun hours	294	295	370	401	452	457	
Total, worst case	1726	268	650	180	928	789	
Sun reduction	0.39	0.42	0.44	0.51	0.55	0.59	
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00	
Wind dir. red.	0.61	0.62	0.68	0.68	0.65	0.65	
Total reduction	0.24	0.26	0.30	0.34	0.35	0.38	
Total, real	408	69	192	62	327	299	

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

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

Baron_SFA

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10/11/2017 10:32 AM / 16

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 564 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (468)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December
1 05:37 19:25 (T35) 06:02 19:25 (T35) 06:35 07:07 06:43 07:23 (T76) 07:20 08:11 (T79)					
20:52 27 19:52 (T35) 20:33 33 19:58 (T35) 19:46 18:54 17:05 10 07:33 (T76) 16:39 56 09:07 (T79)					
2 05:38 19:26 (T35) 06:03 19:25 (T35) 06:36 07:08 06:45 07:22 (T76) 07:21 08:11 (T79)					
20:52 27 19:53 (T35) 20:31 33 19:58 (T35) 19:45 18:52 17:04 14 07:36 (T76) 16:39 56 09:07 (T79)					
3 05:38 19:25 (T35) 06:04 19:26 (T35) 06:37 07:09 06:46 07:20 (T76) 07:22 08:12 (T79)					
20:52 27 19:52 (T35) 20:30 31 19:57 (T35) 19:43 18:50 17:03 17 07:37 (T76) 16:39 55 09:07 (T79)					
4 05:39 19:25 (T35) 06:05 19:27 (T35) 06:38 07:10 06:47 07:18 (T76) 07:23 08:12 (T79)					
20:52 28 19:53 (T35) 20:29 29 19:56 (T35) 19:41 18:48 17:01 20 07:38 (T76) 16:39 56 09:08 (T79)					
5 05:39 19:25 (T35) 06:07 19:28 (T35) 06:39 07:12 06:48 07:18 (T76) 07:24 08:12 (T79)					
20:51 29 19:54 (T35) 20:28 27 19:55 (T35) 19:39 12 18:20 (T40) 18:20 22 07:40 (T76) 16:38 56 09:08 (T79)					
6 05:40 19:25 (T35) 06:08 19:29 (T35) 06:40 07:13 06:50 07:17 (T76) 07:25 08:13 (T79)					
20:51 29 19:54 (T35) 20:27 25 19:54 (T35) 19:38 19 18:35 (T40) 18:45 23 07:40 (T76) 16:38 56 09:09 (T79)					
7 05:41 19:25 (T35) 06:09 19:30 (T35) 06:41 07:14 06:51 07:16 (T76) 07:26 08:13 (T79)					
20:51 30 19:55 (T35) 20:25 22 19:52 (T35) 19:36 24 18:37 (T40) 18:43 32 08:36 (T79) 16:38 56 09:09 (T79)					
8 05:41 19:24 (T35) 06:10 19:32 (T35) 06:43 07:15 06:52 07:17 (T76) 07:27 08:13 (T79)					
20:50 31 19:55 (T35) 20:24 18 19:50 (T35) 19:34 27 18:38 (T40) 18:42 42 08:42 (T79) 16:38 57 09:10 (T79)					
9 05:42 19:24 (T35) 06:11 19:35 (T35) 06:44 07:16 06:53 07:16 (T76) 07:28 08:14 (T79)					
20:50 32 19:56 (T35) 20:23 12 19:47 (T35) 19:32 30 18:39 (T40) 18:40 48 08:44 (T79) 16:38 56 09:10 (T79)					
10 05:43 19:24 (T35) 06:12 19:36 (T35) 06:45 07:17 06:54 07:17 (T76) 07:29 08:14 (T79)					
20:50 33 19:57 (T35) 20:22 19:31 32 18:40 (T40) 18:38 52 08:46 (T79) 16:38 57 09:11 (T79)					
11 05:43 19:24 (T35) 06:13 19:37 (T35) 06:46 07:18 06:56 07:19 (T76) 07:30 08:15 (T79)					
20:49 33 19:57 (T35) 20:20 19:29 35 18:41 (T40) 18:37 54 08:49 (T79) 16:38 56 09:11 (T79)					
12 05:44 19:24 (T35) 06:14 19:47 (T35) 06:47 07:19 06:57 07:20 (T76) 07:30 08:16 (T79)					
20:49 33 19:57 (T35) 20:19 19:27 36 18:41 (T40) 18:35 56 08:51 (T79) 16:38 56 09:12 (T79)					
13 05:45 19:24 (T35) 06:15 19:48 (T35) 06:48 07:21 06:58 07:21 (T76) 07:31 08:16 (T79)					
20:48 34 19:58 (T35) 20:17 19:25 37 18:41 (T40) 18:33 58 08:52 (T79) 16:38 56 09:12 (T79)					
14 05:46 19:24 (T35) 06:16 19:49 (T35) 06:49 07:22 07:00 07:23 (T76) 07:32 08:16 (T79)					
20:48 34 19:58 (T35) 20:16 19:24 39 18:42 (T40) 18:32 58 08:54 (T79) 16:38 56 09:12 (T79)					
15 05:47 19:24 (T35) 06:17 19:50 (T35) 06:50 07:23 07:01 07:24 (T76) 07:33 08:17 (T79)					
20:47 35 19:59 (T35) 20:15 19:22 40 18:42 (T40) 18:30 59 08:55 (T79) 16:39 56 09:13 (T79)					
16 05:47 19:23 (T35) 06:18 19:51 (T35) 06:51 07:24 07:02 07:25 (T76) 07:34 08:17 (T79)					
20:47 35 19:58 (T35) 20:13 19:20 40 18:41 (T40) 18:28 59 08:56 (T79) 16:39 56 09:13 (T79)					
17 05:48 19:23 (T35) 06:19 19:52 (T35) 06:52 07:25 07:03 07:27 (T76) 07:34 08:17 (T79)					
20:46 36 19:59 (T35) 20:12 19:18 41 18:41 (T40) 18:27 58 08:57 (T79) 16:39 56 09:13 (T79)					
18 05:49 19:23 (T35) 06:20 19:53 (T35) 06:53 07:26 07:05 07:28 (T76) 07:35 08:18 (T79)					
20:45 36 19:59 (T35) 20:10 19:17 41 18:42 (T40) 18:25 58 08:58 (T79) 16:40 56 09:14 (T79)					
19 05:50 19:23 (T35) 06:21 19:54 (T35) 06:54 07:28 07:06 07:29 (T76) 07:36 08:19 (T79)					
20:45 37 20:00 (T35) 20:09 19:15 40 18:41 (T40) 18:24 57 08:59 (T79) 16:40 56 09:15 (T79)					
20 05:51 19:23 (T35) 06:22 19:55 (T35) 06:55 07:29 07:07 07:31 (T76) 07:36 08:19 (T79)					
20:44 37 20:00 (T35) 20:07 19:13 41 18:41 (T40) 18:22 56 09:00 (T79) 16:40 56 09:15 (T79)					
21 05:52 19:23 (T35) 06:23 19:56 (T35) 06:56 07:30 07:08 07:32 (T76) 07:37 08:20 (T79)					
20:43 37 20:00 (T35) 20:06 19:11 40 18:40 (T40) 18:21 54 09:01 (T79) 16:41 56 09:16 (T79)					
22 05:53 19:22 (T35) 06:25 19:57 (T35) 06:57 07:31 07:10 08:10 (T79) 07:37 08:20 (T79)					
20:42 38 20:00 (T35) 20:04 19:10 39 18:39 (T40) 18:19 51 09:01 (T79) 16:41 56 09:16 (T79)					
23 05:54 19:22 (T35) 06:26 19:58 (T35) 06:58 07:32 07:11 08:10 (T79) 07:38 08:21 (T79)					
20:41 38 20:00 (T35) 20:03 19:08 38 18:38 (T40) 18:18 52 09:02 (T79) 16:42 56 09:17 (T79)					
24 05:55 19:23 (T35) 06:27 19:59 (T35) 06:59 07:34 07:12 08:11 (T79) 07:38 08:21 (T79)					
20:41 37 20:00 (T35) 20:01 19:06 36 18:37 (T40) 18:16 52 09:03 (T79) 16:42 56 09:17 (T79)					
25 05:55 19:23 (T35) 06:28 19:59 (T35) 07:01 07:35 07:13 08:10 (T79) 07:39 08:21 (T79)					
20:40 37 20:00 (T35) 19:58 19:04 34 18:35 (T40) 18:15 53 09:03 (T79) 16:43 56 09:17 (T79)					
26 05:56 19:23 (T35) 06:29 19:59 (T35) 07:02 07:36 07:14 08:10 (T79) 07:39 08:22 (T79)					
20:39 37 20:00 (T35) 19:56 19:02 32 18:34 (T40) 18:13 54 09:04 (T79) 16:44 56 09:18 (T79)					
27 05:57 19:23 (T35) 06:30 19:59 (T35) 07:03 07:37 07:15 08:10 (T79) 07:39 08:22 (T79)					
20:38 37 20:00 (T35) 19:55 19:01 29 18:32 (T40) 18:12 54 09:04 (T79) 16:44 56 09:18 (T79)					
28 05:58 19:23 (T35) 06:31 19:59 (T35) 07:04 07:39 07:17 08:11 (T79) 07:40 08:23 (T79)					
20:37 37 20:00 (T35) 19:53 18:59 26 18:30 (T40) 18:10 55 09:06 (T79) 16:45 56 09:19 (T79)					
29 05:59 19:24 (T35) 06:32 19:59 (T35) 07:05 07:40 07:18 08:11 (T79) 07:40 08:23 (T79)					
20:36 35 19:59 (T35) 19:51 18:57 21 18:27 (T40) 18:09 55 09:06 (T79) 16:46 56 09:19 (T79)					
30 06:00 19:24 (T35) 06:33 19:59 (T35) 07:06 07:41 07:19 08:11 (T79) 07:40 08:23 (T79)					
20:35 35 19:59 (T35) 19:50 18:55 15 18:24 (T40) 18:08 55 09:06 (T79) 16:46 56 09:19 (T79)					
31 06:01 19:24 (T35) 06:34 07:42 07:40 08:24 (T79)					
20:34 35 19:59 (T35) 19:48 18:06 16:47 57 09:21 (T79)					
Potential sun hours 464 431 375 343 294 283					
Total, worst case 1046 230 844 1388 1738					
Sun reduction 0.64 0.91 0.53 0.29 0.28					
Oper. time red. 1.00 1.00 1.00 1.00 1.00					
Wind dir. red. 0.65 0.65 0.68 0.61 0.61					
Total reduction 0.41 0.58 0.36 0.18 0.17					
Total, real 429 134 301 245 294					

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

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

Project:

Baron_SFA

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10/11/2017 10:32 AM / 18

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 574 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (472)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	07:25	06:48	07:07 (T87)	06:55	06:07
	16:48	17:24	18:00	07:30 (T87)	19:36	20:09
2	07:41	07:24	06:46	07:06 (T87)	06:53	06:06
	16:49	17:25	18:01	07:33 (T87)	19:37	20:10
3	07:41	07:23	06:44	07:04 (T87)	06:51	06:04
	16:50	17:27	18:02	07:34 (T87)	19:38	20:11
4	07:41	07:22	06:43	07:02 (T87)	06:50	06:03
	16:51	17:28	18:04	07:35 (T87)	19:39	20:12
5	07:41	07:21	06:41	07:01 (T87)	06:48	06:02
	16:52	17:29	18:05	07:36 (T87)	19:41	20:13
6	07:41	07:20	06:39	06:59 (T87)	06:46	06:00
	16:53	17:31	18:06	07:37 (T87)	19:42	20:14
7	07:40	07:19	06:38	06:58 (T87)	06:44	05:59
	16:54	17:32	18:07	07:37 (T87)	19:43	20:15
8	07:40	07:18	06:36	07:57 (T87)	06:43	05:58
	16:55	17:33	18:08	08:38 (T87)	19:44	20:17
9	07:40	07:16	06:34	07:56 (T87)	06:41	05:57
	16:56	17:35	18:10	08:38 (T87)	19:45	20:18
10	07:40	07:15	06:33	07:55 (T87)	06:39	05:56
	16:57	17:36	18:11	08:38 (T87)	19:46	20:19
11	07:40	07:14	06:31	07:56 (T87)	06:38	05:54
	16:58	17:37	18:12	08:39 (T87)	19:47	20:20
12	07:39	07:13	06:29	07:55 (T87)	06:36	05:53
	16:59	17:38	18:13	08:38 (T87)	19:48	20:21
13	07:39	07:11	06:28	07:54 (T87)	06:34	05:52
	17:00	17:40	18:14	08:38 (T87)	19:50	20:22
14	07:39	07:10	06:26	07:54 (T87)	06:33	05:51
	17:02	17:41	18:15	08:37 (T87)	19:51	20:23
15	07:38	07:09	06:24	07:54 (T87)	06:31	05:50
	17:03	17:42	18:17	08:37 (T87)	19:52	20:24
16	07:38	07:07	06:22	07:54 (T87)	06:30	05:49
	17:04	17:44	18:18	08:36 (T87)	19:53	20:25
17	07:37	07:06	06:21	07:40 (T76)	06:28	05:48
	17:05	17:45	18:19	08:35 (T87)	19:54	20:26
18	07:37	07:04	06:19	07:38 (T76)	06:26	05:47
	17:06	17:46	18:20	08:34 (T87)	19:55	20:27
19	07:36	07:03	06:17	07:37 (T76)	06:25	05:46
	17:07	17:47	18:21	08:34 (T87)	19:56	20:28
20	07:35	07:01	06:16	07:35 (T76)	06:23	05:45
	17:09	17:49	18:22	08:32 (T87)	19:57	20:29
21	07:35	07:00	06:14	07:33 (T76)	06:22	05:44
	17:10	17:50	18:24	08:30 (T87)	19:59	20:30
22	07:34	06:58	06:12	07:31 (T76)	06:20	05:43
	17:11	17:51	18:25	08:28 (T87)	20:00	20:31
23	07:33	06:57	06:10	07:30 (T76)	06:19	05:42
	17:12	17:52	18:26	08:27 (T87)	20:00	20:32
24	07:33	06:55	06:09	07:28 (T76)	06:17	05:41
	17:14	17:54	18:27	08:25 (T87)	20:01	20:33
25	07:32	06:54	06:07	07:26 (T76)	06:16	05:40
	17:15	17:55	18:28	08:22 (T87)	20:02	20:34
26	07:31	06:52	06:05	07:26 (T76)	06:14	05:39
	17:16	17:56	18:29	08:17 (T87)	20:03	20:35
27	07:30	06:51	06:03	07:27 (T76)	06:13	05:38
	17:18	17:57	18:30	07:49 (T76)	20:04	20:36
28	07:29	06:49	06:01	07:27 (T76)	06:11	05:37
	17:19	17:59	18:31	07:47 (T76)	20:05	20:37
29	07:28		06:00	07:27 (T76)	06:10	05:36
	17:20		18:33	07:46 (T76)	20:06	20:38
30	07:27		05:58	07:28 (T76)	06:08	05:35
	17:21		18:34	07:44 (T76)	20:08	20:39
31	07:26		05:56	07:31 (T76)	06:07	05:34
	17:23		18:35	07:42 (T76)	20:09	20:40
Potential sun hours	294	295	370	401	452	457
Total, worst case		25	1165	314	1538	973
Sun reduction		0.42	0.44	0.51	0.55	0.59
Oper. time red.		1.00	1.00	1.00	1.00	1.00
Wind dir. red.		0.65	0.66	0.68	0.68	0.68
Total reduction		0.27	0.29	0.35	0.37	0.40
Total, real		7	335	109	574	390

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

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

Project:
Baron_SFA

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10/11/2017 10:32 AM / 19

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 574 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (472)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37	06:46 (T79) 06:02	06:40 (T79) 06:35	07:07	07:33 (T87) 06:43	07:20
	20:52	32 07:18 (T79) 20:33	53 07:33 (T79) 19:46	18:54	44 08:17 (T87) 17:05	16:39
2	05:38	06:46 (T79) 06:03	06:40 (T79) 06:36	07:08	07:34 (T87) 06:45	07:21
	20:52	34 07:20 (T79) 20:31	53 07:33 (T79) 19:45	18:52	43 08:17 (T87) 17:04	16:39
3	05:38	06:46 (T79) 06:04	06:40 (T79) 06:37	07:09	07:34 (T87) 06:46	07:22
	20:52	34 07:20 (T79) 20:30	53 07:33 (T79) 19:43	18:50	43 08:17 (T87) 17:03	16:39
4	05:39	06:46 (T79) 06:06	06:40 (T79) 06:38	07:10	07:34 (T87) 06:47	07:23
	20:52	35 07:21 (T79) 20:29	53 07:33 (T79) 19:41	18:48	42 08:16 (T87) 17:01	16:39
5	05:39	06:46 (T79) 06:07	06:40 (T79) 06:39	07:12	07:34 (T87) 06:48	07:24
	20:51	36 07:22 (T79) 20:28	52 07:32 (T79) 19:39	18:47	41 08:15 (T87) 17:00	16:38
6	05:40	06:45 (T79) 06:08	06:40 (T79) 06:40	07:13	07:34 (T87) 06:50	07:25
	20:51	37 07:22 (T79) 20:27	52 07:32 (T79) 19:38	18:45	40 08:14 (T87) 16:59	16:38
7	05:41	06:45 (T79) 06:09	06:41 (T79) 06:42	07:14	07:34 (T87) 06:51	07:26
	20:51	38 07:23 (T79) 20:25	51 07:32 (T79) 19:36	18:43	39 08:13 (T87) 16:58	16:38
8	05:41	06:44 (T79) 06:10	06:41 (T79) 06:43	07:15	07:35 (T87) 06:52	07:27
	20:50	39 07:23 (T79) 20:24	50 07:31 (T79) 19:34	18:42	37 08:12 (T87) 16:57	16:38
9	05:42	06:44 (T79) 06:11	06:41 (T79) 06:44	07:16	07:36 (T87) 06:53	07:28
	20:50	40 07:24 (T79) 20:23	50 07:31 (T79) 19:32	18:40	34 08:10 (T87) 16:55	16:38
10	05:43	06:44 (T79) 06:12	06:42 (T79) 06:45	07:17	07:38 (T87) 06:55	07:29
	20:50	41 07:25 (T79) 20:22	48 07:30 (T79) 19:31	18:38	31 08:09 (T87) 16:54	16:38
11	05:43	06:44 (T79) 06:13	06:42 (T79) 06:46	07:18	07:39 (T87) 06:56	07:30
	20:49	41 07:25 (T79) 20:20	47 07:29 (T79) 19:29	18:37	28 08:07 (T87) 16:53	16:38
12	05:44	06:43 (T79) 06:14	06:43 (T79) 06:47	07:22 (T76) 07:19	07:40 (T87) 06:57	07:30
	20:49	42 07:25 (T79) 20:19	46 07:29 (T79) 19:27	11 07:33 (T76) 18:35	25 08:05 (T87) 16:52	16:38
13	05:45	06:43 (T79) 06:15	06:43 (T79) 06:48	07:20 (T76) 07:21	07:41 (T87) 06:58	07:31
	20:48	43 07:26 (T79) 20:17	45 07:28 (T79) 19:25	15 07:35 (T76) 18:33	21 08:02 (T87) 16:51	16:38
14	05:46	06:43 (T79) 06:16	06:44 (T79) 06:49	07:18 (T76) 07:22	07:44 (T87) 07:00	07:32
	20:48	44 07:27 (T79) 20:16	43 07:27 (T79) 19:24	18 07:36 (T76) 18:32	15 07:59 (T87) 16:50	16:38
15	05:47	06:43 (T79) 06:17	06:45 (T79) 06:50	07:16 (T76) 07:23	07:01	07:33
	20:47	45 07:28 (T79) 20:15	40 07:25 (T79) 19:22	21 07:37 (T76) 18:30	16:49	16:39
16	05:47	06:42 (T79) 06:18	06:46 (T79) 06:51	07:15 (T76) 07:24	07:02	07:34
	20:47	46 07:28 (T79) 20:13	38 07:24 (T79) 19:20	22 07:37 (T76) 18:28	16:49	16:39
17	05:48	06:42 (T79) 06:19	06:47 (T79) 06:52	07:15 (T76) 07:25	07:03	07:34
	20:46	46 07:28 (T79) 20:12	35 07:22 (T79) 19:18	32 08:05 (T87) 18:27	16:48	16:39
18	05:49	06:42 (T79) 06:20	06:48 (T79) 06:53	07:14 (T76) 07:26	07:05	07:35
	20:45	47 07:29 (T79) 20:10	32 07:20 (T79) 19:17	42 08:09 (T87) 18:25	16:47	16:40
19	05:50	06:42 (T79) 06:21	06:50 (T79) 06:54	07:15 (T76) 07:28	07:06	07:36
	20:45	48 07:30 (T79) 20:09	28 07:18 (T79) 19:15	47 08:12 (T87) 18:24	16:46	16:40
20	05:51	06:42 (T79) 06:22	06:52 (T79) 06:55	07:16 (T76) 07:29	07:07	07:36
	20:44	48 07:30 (T79) 20:07	24 07:16 (T79) 19:13	48 08:13 (T87) 18:22	16:45	16:40
21	05:52	06:42 (T79) 06:23	06:55 (T79) 06:56	07:17 (T76) 07:30	07:08	07:37
	20:43	49 07:31 (T79) 20:06	17 07:12 (T79) 19:11	49 08:14 (T87) 18:21	16:45	16:41
22	05:53	06:41 (T79) 06:25	07:02 (T79) 06:57	07:18 (T76) 07:31	07:10	07:37
	20:42	49 07:30 (T79) 20:04	3 07:05 (T79) 19:10	50 08:15 (T87) 18:19	16:44	16:41
23	05:54	06:40 (T79) 06:26	06:58	07:19 (T76) 07:32	07:11	07:38
	20:41	51 07:31 (T79) 20:03	19:08	51 08:16 (T87) 18:18	16:43	16:42
24	05:55	06:40 (T79) 06:27	07:00	07:20 (T76) 07:34	07:12	07:38
	20:41	51 07:31 (T79) 20:01	19:06	51 08:17 (T87) 18:16	16:43	16:42
25	05:55	06:40 (T79) 06:28	07:01	07:21 (T76) 07:35	07:13	07:39
	20:40	52 07:32 (T79) 19:58	19:04	48 08:17 (T87) 18:15	16:42	16:43
26	05:56	06:40 (T79) 06:29	07:02	07:22 (T76) 07:36	07:14	07:39
	20:39	52 07:32 (T79) 19:56	19:02	45 08:17 (T87) 18:13	16:41	16:44
27	05:57	06:40 (T79) 06:30	07:03	07:36 (T87) 07:37	07:15	07:39
	20:38	52 07:32 (T79) 19:55	19:01	42 08:18 (T87) 18:12	16:41	16:44
28	05:58	06:40 (T79) 06:31	07:04	07:35 (T87) 07:39	07:17	07:40
	20:37	53 07:33 (T79) 19:53	18:59	43 08:18 (T87) 18:10	16:41	16:45
29	05:59	06:40 (T79) 06:32	07:05	07:34 (T87) 07:40	07:18	07:40
	20:36	53 07:33 (T79) 19:51	18:57	43 08:17 (T87) 18:09	16:40	16:46
30	06:00	06:40 (T79) 06:33	07:06	07:34 (T87) 07:41	07:19	07:40
	20:35	53 07:33 (T79) 19:50	18:55	43 08:17 (T87) 18:08	16:40	16:46
31	06:01	06:40 (T79) 06:34		07:42		07:40
	20:34	53 07:33 (T79) 19:48		18:06		16:47
Potential sun hours	464	431	375	343	294	283
Total, worst case	1384	913	721	483		
Sun reduction	0.64	0.91	0.53	0.45		
Oper. time red.	1.00	1.00	1.00	1.00		
Wind dir. red.	0.68	0.68	0.66	0.65		
Total reduction	0.43	0.62	0.35	0.29		
Total, real	601	564	251	141		

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

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

Project:

Baron_SFA

Printed/Page

10/11/2017 10:32 AM / 20

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 576 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (474)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	08:10 (T79) 07:25	07:46 (T76) 06:48	06:55	18:17 (T40) 06:07	05:37
	16:48	34 08:44 (T79) 17:24	62 09:02 (T79) 18:00	19:36	44 19:01 (T40) 20:09	20:40
2	07:41	08:10 (T79) 07:24	07:45 (T76) 06:46	06:53	18:16 (T40) 06:06	05:36
	16:49	35 08:45 (T79) 17:25	64 09:02 (T79) 18:01	19:37	44 19:00 (T40) 20:10	20:41
3	07:41	08:10 (T79) 07:23	07:44 (T76) 06:44	06:51	18:16 (T40) 06:04	05:36
	16:50	36 08:46 (T79) 17:27	65 09:02 (T79) 18:02	19:38	45 19:01 (T40) 20:11	20:42
4	07:41	08:10 (T79) 07:22	07:43 (T76) 06:43	06:50	18:16 (T40) 06:03	05:35
	16:51	37 08:47 (T79) 17:28	66 09:02 (T79) 18:04	19:39	44 19:00 (T40) 20:12	20:42
5	07:41	08:09 (T79) 07:21	07:42 (T76) 06:41	06:48	18:15 (T40) 06:02	05:35
	16:52	38 08:47 (T79) 17:29	68 09:02 (T79) 18:05	19:41	45 19:00 (T40) 20:13	20:43
6	07:41	08:09 (T79) 07:20	07:41 (T76) 06:39	06:46	18:15 (T40) 06:00	05:35
	16:53	39 08:48 (T79) 17:31	68 09:01 (T79) 18:06	19:42	44 18:59 (T40) 20:14	20:44
7	07:40	08:09 (T79) 07:19	07:39 (T76) 06:38	06:44	18:16 (T40) 05:59	05:34
	16:54	40 08:49 (T79) 17:32	68 09:00 (T79) 18:07	19:43	43 18:59 (T40) 20:15	20:45
8	07:40	08:09 (T79) 07:18	07:38 (T76) 06:36	06:43	18:16 (T40) 05:58	05:34
	16:55	41 08:50 (T79) 17:33	69 09:00 (T79) 19:08	19:44	42 18:58 (T40) 20:17	20:45
9	07:40	08:09 (T79) 07:16	07:37 (T76) 06:34	06:41	18:16 (T40) 05:57	05:34
	16:56	42 08:51 (T79) 17:34	68 08:59 (T79) 19:10	19:45	41 18:57 (T40) 20:18	20:46
10	07:40	08:08 (T79) 07:15	07:38 (T76) 06:33	06:39	18:17 (T40) 05:56	05:34
	16:57	43 08:51 (T79) 17:36	64 08:58 (T79) 19:11	19:46	39 18:56 (T40) 20:19	20:46
11	07:40	08:09 (T79) 07:14	07:37 (T76) 06:31	06:38	18:17 (T40) 05:54	05:33
	16:58	44 08:53 (T79) 17:37	62 08:56 (T79) 19:12	19:47	38 18:55 (T40) 20:20	20:47
12	07:39	08:09 (T79) 07:13	07:38 (T76) 06:29	06:36	18:17 (T40) 05:53	05:33
	16:59	45 08:54 (T79) 17:38	58 08:55 (T79) 19:13	19:48	36 18:53 (T40) 20:21	20:48
13	07:39	08:08 (T79) 07:11	07:39 (T76) 06:28	06:34	18:19 (T40) 05:52	05:33
	17:00	46 08:54 (T79) 17:40	54 08:54 (T79) 19:14	19:50	34 18:53 (T40) 20:22	20:48
14	07:39	08:09 (T79) 07:10	07:40 (T76) 06:26	06:33	18:20 (T40) 05:51	05:33
	17:02	46 08:55 (T79) 17:41	48 08:52 (T79) 19:15	19:51	31 18:51 (T40) 20:23	20:49
15	07:38	08:08 (T79) 07:09	07:42 (T76) 06:24	06:31	18:22 (T40) 05:50	05:33
	17:03	48 08:56 (T79) 17:42	40 08:50 (T79) 19:17	19:52	27 18:49 (T40) 20:24	20:49
16	07:38	08:09 (T79) 07:07	07:43 (T76) 06:22	06:30	18:23 (T40) 05:49	05:33
	17:04	48 08:57 (T79) 17:44	31 08:46 (T79) 19:18	19:53	24 18:47 (T40) 20:25	20:49
17	07:37	08:08 (T79) 07:06	08:31 (T79) 07:21	06:28	18:25 (T40) 05:48	05:33
	17:05	49 08:57 (T79) 17:45	11 08:42 (T79) 19:19	19:54	19 18:44 (T40) 20:26	6 19:46 (T35) 20:50
18	07:37	08:08 (T79) 07:04	07:19	06:26	18:29 (T40) 05:47	19:36 (T35) 05:33
	17:06	50 08:58 (T79) 17:46	19:20	19:55	11 18:40 (T40) 20:27	14 19:50 (T35) 20:50
19	07:36	08:08 (T79) 07:03	07:17	06:25	05:46	19:34 (T35) 05:33
	17:07	51 08:59 (T79) 17:47	19:21	19:56	20:28	18 19:52 (T35) 20:51
20	07:35	08:08 (T79) 07:01	07:16	06:23	05:45	19:33 (T35) 05:34
	17:09	51 08:59 (T79) 17:49	19:22	19:57	20:29	21 19:54 (T35) 20:51
21	07:35	08:08 (T79) 07:00	07:14	06:22	05:44	19:32 (T35) 05:34
	17:10	51 08:59 (T79) 17:50	19:24	15 18:34 (T40) 06:22	05:44	19:32 (T35) 05:34
22	07:34	08:09 (T79) 06:58	07:12	18:49 (T40) 19:59	20:30	24 19:56 (T35) 20:51
	17:11	52 09:01 (T79) 17:51	19:25	22 18:52 (T40) 20:00	05:43	19:31 (T35) 05:34
23	07:33	08:09 (T79) 06:57	07:10	18:28 (T40) 06:19	05:43	19:30 (T35) 05:34
	17:12	52 09:01 (T79) 17:52	19:26	27 18:55 (T40) 20:00	20:32	27 19:57 (T35) 20:52
24	07:33	08:08 (T79) 06:55	07:09	18:26 (T40) 06:17	05:42	19:30 (T35) 05:34
	17:14	53 09:01 (T79) 17:54	19:27	30 18:56 (T40) 20:01	20:33	29 19:59 (T35) 20:52
25	07:32	08:08 (T79) 06:54	07:07	18:24 (T40) 06:16	05:41	19:29 (T35) 05:35
	17:15	53 09:01 (T79) 17:55	19:28	33 18:57 (T40) 20:02	20:34	30 19:59 (T35) 20:52
26	07:31	08:08 (T79) 06:52	07:05	18:22 (T40) 06:14	05:40	19:28 (T35) 05:35
	17:16	54 09:02 (T79) 17:56	19:29	36 18:58 (T40) 20:03	20:35	32 20:00 (T35) 20:52
27	07:30	08:08 (T79) 06:51	07:03	18:21 (T40) 06:13	05:40	19:28 (T35) 05:35
	17:18	54 09:02 (T79) 17:57	19:30	39 19:00 (T40) 20:04	20:36	33 20:01 (T35) 20:52
28	07:29	08:09 (T79) 06:49	07:02	18:20 (T40) 06:11	05:39	19:27 (T35) 05:36
	17:19	53 09:02 (T79) 17:59	19:31	40 19:00 (T40) 20:05	20:37	34 20:01 (T35) 20:52
29	07:28	08:09 (T79)	07:00	18:19 (T40) 06:10	05:38	19:27 (T35) 05:36
	17:20	53 09:02 (T79)	19:33	41 19:00 (T40) 20:06	20:38	34 20:01 (T35) 20:52
30	07:27	07:48 (T76)	06:58	18:18 (T40) 06:08	05:38	19:27 (T35) 05:37
	17:21	57 09:02 (T79)	19:34	42 19:00 (T40) 20:08	20:38	35 20:02 (T35) 20:52
31	07:26	07:47 (T76)	06:56	18:18 (T40)	05:37	19:26 (T35)
	17:23	60 09:02 (T79)	19:35	43 19:01 (T40)	20:39	36 20:02 (T35)
Potential sun hours	294	295	370	401	452	457
Total, worst case	1455	966	368	651	399	1179
Sun reduction	0.39	0.42	0.44	0.51	0.55	0.59
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.61	0.62	0.68	0.68	0.64	0.64
Total reduction	0.24	0.26	0.30	0.34	0.35	0.37
Total, real	347	250	109	223	139	441

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

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

Project:
Baron_SFA

Printed/Page
10/11/2017 10:32 AM / 21

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 576 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (474)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37 20:52 39	19:31 (T35) 06:02 20:10 (T35) 20:33	06:35 19:46	18:16 (T40) 07:07 20:10 (T40) 18:34	06:43 17:05	07:06 (T76) 07:20 08:27 (T79) 16:39
2	05:38 20:52 39	19:32 (T35) 06:03 20:11 (T35) 20:31	06:36 19:45	18:15 (T40) 07:08 18:54 (T40) 18:52	06:45 17:04	07:07 (T76) 07:21 08:29 (T79) 16:39
3	05:38 20:52 39	19:31 (T35) 06:04 20:10 (T35) 20:30	06:37 19:43	18:14 (T40) 07:09 18:55 (T40) 18:50	06:46 17:03	07:08 (T76) 07:22 08:30 (T79) 16:39
4	05:39 20:52 39	19:32 (T35) 06:05 20:11 (T35) 20:29	06:38 19:41	18:13 (T40) 07:10 18:55 (T40) 18:48	06:47 17:01	07:09 (T76) 07:23 08:30 (T79) 16:39
5	05:39 20:51 39	19:33 (T35) 06:07 20:12 (T35) 20:28	06:39 19:39	18:12 (T40) 07:12 18:55 (T40) 18:47	06:48 17:00	07:11 (T76) 07:24 08:31 (T79) 16:38
6	05:40 20:51 39	19:32 (T35) 06:08 20:11 (T35) 20:27	06:40 19:38	18:11 (T40) 07:13 18:55 (T40) 18:45	06:50 16:59	07:12 (T76) 07:25 08:32 (T79) 16:38
7	05:41 20:51 38	19:33 (T35) 06:09 20:11 (T35) 20:25	06:41 19:36	18:10 (T40) 07:14 18:55 (T40) 18:43	06:51 16:58	07:13 (T76) 07:26 08:32 (T79) 16:38
8	05:41 20:50 38	19:33 (T35) 06:10 20:11 (T35) 20:24	06:43 19:34	18:10 (T40) 07:15 18:54 (T40) 18:42	06:52 16:57	07:15 (T76) 07:27 08:33 (T79) 16:38
9	05:42 20:50 38	19:33 (T35) 06:11 20:11 (T35) 20:23	06:44 19:32	18:09 (T40) 07:16 18:54 (T40) 18:40	06:53 16:55	07:16 (T76) 07:28 08:33 (T79) 16:38
10	05:43 20:50 37	19:34 (T35) 06:12 20:11 (T35) 20:22	06:45 19:31	18:09 (T40) 07:17 18:53 (T40) 18:38	06:55 16:54	07:17 (T76) 07:29 08:33 (T79) 16:38
11	05:43 20:49 37	19:35 (T35) 06:13 20:12 (T35) 20:20	06:46 19:29	18:09 (T40) 07:18 18:53 (T40) 18:37	06:56 16:53	07:19 (T76) 07:30 08:34 (T79) 16:38
12	05:44 20:49 37	19:34 (T35) 06:14 20:11 (T35) 20:19	06:47 19:27	18:09 (T40) 07:19 18:52 (T40) 18:35	06:57 16:52	07:20 (T76) 07:30 08:34 (T79) 16:38
13	05:45 20:48 36	19:35 (T35) 06:15 20:11 (T35) 20:17	06:48 19:25	18:09 (T40) 07:21 18:51 (T40) 18:33	06:58 16:51	07:41 (T79) 07:31 08:34 (T79) 16:38
14	05:46 20:48 35	19:36 (T35) 06:16 20:11 (T35) 20:16	06:49 19:24	18:09 (T40) 07:22 18:50 (T40) 18:32	07:00 16:50	07:42 (T79) 07:32 08:35 (T79) 16:38
15	05:47 20:47 35	19:36 (T35) 06:17 20:11 (T35) 20:15	06:50 19:22	18:09 (T40) 07:23 18:49 (T40) 18:30	07:01 16:49	07:41 (T79) 07:33 08:35 (T79) 16:39
16	05:47 20:47 34	19:37 (T35) 06:18 20:10 (T35) 20:13	06:51 19:20	18:09 (T40) 07:24 18:48 (T40) 18:28	07:02 16:49	07:41 (T79) 07:34 08:35 (T79) 16:39
17	05:48 20:46 32	19:37 (T35) 06:19 20:09 (T35) 20:12	06:52 19:18	18:10 (T40) 07:25 18:47 (T40) 18:27	07:03 16:48	07:42 (T79) 07:34 08:35 (T79) 16:39
18	05:49 20:45 31	19:38 (T35) 06:20 20:09 (T35) 20:10	06:53 19:17	18:12 (T40) 07:26 18:46 (T40) 18:25	07:05 16:47	07:42 (T79) 07:35 08:35 (T79) 16:40
19	05:50 20:45 30	19:39 (T35) 06:21 20:09 (T35) 20:09	06:54 19:15	18:13 (T40) 07:28 18:44 (T40) 18:24	07:06 16:46	07:43 (T79) 07:36 08:35 (T79) 16:40
20	05:51 20:44 28	19:40 (T35) 06:22 20:08 (T35) 20:07	06:55 19:13	18:14 (T40) 07:29 18:42 (T40) 18:22	07:07 16:45	07:44 (T79) 07:36 08:36 (T79) 16:40
21	05:52 20:43 26	19:41 (T35) 06:23 20:07 (T35) 20:06	06:56 19:11	18:16 (T40) 07:30 18:39 (T40) 18:21	07:08 16:45	07:44 (T79) 07:37 08:36 (T79) 16:41
22	05:53 20:42 25	19:41 (T35) 06:25 20:06 (T35) 20:04	06:57 19:10	18:18 (T40) 07:31 18:36 (T40) 18:19	07:10 16:44	07:44 (T79) 07:37 08:35 (T79) 16:41
23	05:54 20:41 23	19:42 (T35) 06:26 20:05 (T35) 20:03	06:58 19:08	18:23 (T40) 07:32 18:30 (T40) 18:18	07:11 16:43	07:44 (T79) 07:38 08:35 (T79) 16:42
24	05:55 20:41 19	19:44 (T35) 06:27 20:03 (T35) 20:01	07:00 19:06	18:24 (T40) 07:34 18:16 (T40) 18:16	07:12 16:43	07:46 (T79) 07:38 08:36 (T79) 16:42
25	05:55 20:40 16	19:46 (T35) 06:28 20:02 (T35) 19:58	07:01 19:04	18:25 (T40) 07:35 18:44 (T40) 18:15	07:13 16:42	07:46 (T79) 07:39 08:35 (T79) 16:43
26	05:56 20:39 11	19:48 (T35) 06:29 19:59 (T35) 19:56	07:02 19:02	18:27 (T40) 07:36 18:47 (T40) 18:13	07:14 16:41	07:47 (T79) 07:39 09:17 (T79) 16:44
27	05:57 20:38 10	19:50 (T35) 06:30 19:55 (T35) 19:55	07:03 19:01	18:25 (T40) 07:37 18:49 (T40) 18:12	07:15 16:41	07:47 (T79) 07:39 08:35 (T79) 16:44
28	05:58 20:37 9	19:53 (T35) 06:31 19:53 (T35) 19:53	07:04 18:59	18:22 (T40) 07:38 18:50 (T40) 18:09	07:17 16:41	07:49 (T79) 07:40 09:22 (T79) 16:45
29	05:59 20:36 8	19:56 (T35) 06:32 19:51 (T35) 19:51	07:05 18:57	18:20 (T40) 07:39 18:52 (T40) 18:07	07:18 16:40	08:08 (T76) 07:41 09:23 (T79) 16:46
30	06:00 20:35 7	19:59 (T35) 06:33 19:50 (T35) 19:50	07:06 18:55	18:19 (T40) 07:40 18:53 (T40) 18:05	07:19 16:40	08:08 (T76) 07:42 09:25 (T79) 16:46
31	06:01 20:34 6	19:58 (T35) 06:34 19:48 (T35) 19:48	07:07 18:53 (T40)	18:17 (T40) 07:42 18:06 (T40)	07:20 16:40	08:07 (T76) 07:43 09:26 (T79)
Potential sun hours	464	431	375	343	294	283
Total, worst case	840	187	852	319	1687	1042
Sun reduction	0.64	0.91	0.53	0.45	0.29	0.28
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.64	0.68	0.68	0.62	0.62	0.61
Total reduction	0.41	0.61	0.36	0.28	0.18	0.17
Total, real	341	114	303	89	300	178

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

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

Baron_SFA

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Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 578 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (475)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum

210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	08:27 (T87)	07:25	07:54 (T79)	06:48	06:55
2	16:48	28 08:55 (T87)	17:24	47 08:41 (T79)	18:00	18:20 (T40)
3	07:41	08:28 (T87)	07:24	07:54 (T79)	06:46	06:53
4	16:49	27 08:55 (T87)	17:25	48 08:42 (T79)	18:01	19:03 (T40)
5	07:41	08:28 (T87)	07:23	07:54 (T79)	06:44	06:51
6	16:50	27 08:55 (T87)	17:27	48 08:42 (T79)	18:02	19:37 (T40)
7	07:41	08:29 (T87)	07:22	07:54 (T79)	06:43	06:51
8	16:51	26 08:55 (T87)	17:28	49 08:43 (T79)	18:04	18:18 (T40)
9	07:41	08:29 (T87)	07:21	07:54 (T79)	06:41	06:50
10	16:52	25 08:54 (T87)	17:29	49 08:43 (T79)	18:05	19:39 (T40)
11	07:41	08:31 (T87)	07:20	07:54 (T79)	06:39	06:48
12	16:53	23 08:54 (T87)	17:31	49 08:43 (T79)	18:06	19:41 (T40)
13	07:40	08:32 (T87)	07:19	07:53 (T79)	06:38	06:46
14	16:54	22 08:54 (T87)	17:32	50 08:43 (T79)	18:07	19:42 (T40)
15	07:40	08:33 (T87)	07:18	07:54 (T79)	06:36	06:44
16	16:55	20 08:53 (T87)	17:33	49 08:43 (T79)	18:08	19:43 (T40)
17	07:40	08:35 (T87)	07:16	07:54 (T79)	06:34	06:43
18	16:56	18 08:53 (T87)	17:34	49 08:43 (T79)	18:09	19:44 (T40)
19	07:40	08:36 (T87)	07:15	07:55 (T79)	06:33	06:41
20	16:57	16 08:52 (T87)	17:36	48 08:43 (T79)	18:11	19:45 (T40)
21	07:40	08:38 (T87)	07:14	07:55 (T79)	06:31	06:40
22	16:58	13 08:51 (T87)	17:37	47 08:42 (T79)	18:12	19:46 (T40)
23	07:39	08:41 (T87)	07:13	07:55 (T79)	06:29	06:38
24	16:59	8 08:49 (T87)	17:38	47 08:42 (T79)	18:13	19:47 (T40)
25	07:39	07:11	17:40	46 08:42 (T79)	18:14	19:48 (T40)
26	17:00	08:10 (T79)	07:10	46 08:42 (T79)	18:14	19:49 (T40)
27	07:39	7 08:17 (T79)	17:41	45 08:41 (T79)	18:15	19:50 (T40)
28	17:02	08:06 (T79)	07:09	45 08:41 (T79)	18:15	19:51 (T40)
29	07:38	14 08:20 (T79)	17:42	43 08:40 (T79)	18:16	19:52 (T40)
30	17:03	08:05 (T79)	07:07	43 08:40 (T79)	18:16	19:52 (T40)
31	07:38	18 08:23 (T79)	17:44	42 08:39 (T79)	18:17	19:53 (T40)
32	17:04	08:03 (T79)	07:06	42 08:39 (T79)	18:17	19:53 (T40)
33	07:37	22 08:25 (T79)	17:45	39 08:38 (T79)	18:18	19:54 (T40)
34	17:05	08:01 (T79)	07:04	39 08:38 (T79)	18:18	19:54 (T40)
35	07:37	26 08:27 (T79)	17:46	37 08:36 (T79)	18:19	19:55 (T40)
36	17:06	08:01 (T79)	07:03	37 08:36 (T79)	18:17	19:55 (T40)
37	07:36	28 08:29 (T79)	17:47	34 08:35 (T79)	18:18	19:56 (T40)
38	17:07	08:00 (T79)	07:01	34 08:35 (T79)	18:18	19:56 (T40)
39	07:35	30 08:30 (T79)	17:49	31 08:34 (T79)	18:19	19:57 (T40)
40	17:08	07:59 (T79)	07:00	31 08:34 (T79)	18:19	19:57 (T40)
41	07:35	32 08:31 (T79)	17:50	27 08:31 (T79)	18:20	19:58 (T40)
42	17:10	08:31 (T79)	06:58	27 08:31 (T79)	18:20	19:58 (T40)
43	07:34	34 08:33 (T79)	17:51	22 08:28 (T79)	18:21	19:59 (T40)
44	17:11	07:58 (T79)	06:57	22 08:28 (T79)	18:21	19:59 (T40)
45	07:33	36 08:34 (T79)	17:52	15 08:25 (T79)	18:22	20:00 (T40)
46	17:12	07:57 (T79)	06:55	15 08:25 (T79)	18:22	20:00 (T40)
47	07:33	38 08:35 (T79)	17:54	5 18:41 (T40)	18:23	20:01 (T40)
48	17:14	07:56 (T79)	06:54	5 18:41 (T40)	18:24	20:01 (T40)
49	07:32	40 08:36 (T79)	17:55	18 18:52 (T40)	18:24	20:01 (T40)
50	17:15	07:56 (T79)	06:52	18 18:52 (T40)	18:26	20:02 (T40)
51	07:31	41 08:37 (T79)	17:56	25 18:55 (T40)	18:26	20:02 (T40)
52	17:16	07:55 (T79)	06:51	25 18:55 (T40)	18:30	20:03 (T40)
53	07:30	43 08:38 (T79)	17:57	30 18:58 (T40)	18:30	20:03 (T40)
54	17:18	07:55 (T79)	06:49	30 18:58 (T40)	18:32	20:04 (T40)
55	07:29	44 08:39 (T79)	17:59	33 18:59 (T40)	18:32	20:04 (T40)
56	17:19	07:54 (T79)	06:48	33 18:59 (T40)	18:34	20:05 (T40)
57	07:28	45 08:39 (T79)	17:59	36 19:00 (T40)	18:34	20:05 (T40)
58	17:20	07:54 (T79)	06:47	36 19:00 (T40)	18:36	20:06 (T40)
59	07:27	46 08:40 (T79)	17:59	39 19:01 (T40)	18:36	20:06 (T40)
60	17:21	07:54 (T79)	06:46	39 19:01 (T40)	18:38	20:07 (T40)
61	07:26	47 08:41 (T79)	17:59	41 19:02 (T40)	18:38	20:08 (T40)
62	17:23	07:54 (T79)	06:45	41 19:02 (T40)	18:41	20:08 (T40)
63	07:26	06:45	17:59	41 19:02 (T40)	19:51 (T35)	19:55 (T35)
64	17:23	47 08:41 (T79)	17:59	41 19:02 (T40)	20:39	20:39
65	Potential sun hours	294	295	370	401	452
66	Total, worst case	844	961	227	1067	826
67	Sun reduction	0.39	0.42	0.44	0.51	0.55
68	Oper. time red.	1.00	1.00	1.00	1.00	1.00
69	Wind dir. red.	0.61	0.62	0.67	0.67	0.63
70	Total reduction	0.24	0.26	0.29	0.34	0.37
71	Total, real	200	247	67	363	303

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

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

Project: Baron_SFA

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217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated: 10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 583 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (476)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

Table with columns for months (January to June) and rows for specific times of day (e.g., 1:07:40, 16:48, etc.). The bottom of the table includes summary statistics for 'Potential sun hours', 'Total, worst case', 'Sun reduction', 'Oper. time red.', 'Wind dir. red.', 'Total reduction', and 'Total, real'.

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

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

Project:

Baron_SFA

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(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 583 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (476)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of data for sunshine probability.

Operational time

Table with 15 columns (N-Sum) and 2 rows of data for operational time.

Main shadow calculation table with columns for months (July-December) and rows for time slots (05:37-20:34) and summary statistics.

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

Matrix layout table with columns for Day in month, Sun rise/set, Minutes with flicker, and Last time with flicker.

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Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 584 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (477)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1 07:40	15:52 (T87) 07:25		06:48	16:53 (T79) 06:55	06:07	05:37
16:48	27 16:19 (T87) 17:24		18:00	30 17:23 (T79) 19:36	20:09	20:40
2 07:40	15:53 (T87) 07:24		06:46	16:54 (T79) 06:53	06:06	05:36
16:49	27 16:20 (T87) 17:25		18:01	29 17:23 (T79) 19:37	20:10	20:41
3 07:41	15:53 (T87) 07:23		06:44	16:54 (T79) 06:51	06:04	05:36
16:50	28 16:21 (T87) 17:27		18:02	27 17:21 (T79) 19:38	20:11	20:42
4 07:41	15:52 (T87) 07:22		06:43	16:55 (T79) 06:49	06:03	05:35
16:51	28 16:20 (T87) 17:28		18:03	25 17:19 (T79) 19:39	20:12	20:42
5 07:41	15:52 (T87) 07:21		06:41	16:56 (T79) 06:48	06:02	05:35
16:52	29 16:21 (T87) 17:29		18:05	23 17:19 (T79) 19:40	20:13	20:43
6 07:40	15:53 (T87) 07:20		06:39	16:58 (T79) 06:46	06:00	05:35
16:53	29 16:22 (T87) 17:30		18:06	19 17:17 (T79) 19:42	20:14	20:44
7 07:40	15:53 (T87) 07:19		06:38	16:59 (T79) 06:44	05:59	05:34
16:54	30 16:23 (T87) 17:32		18:07	15 17:14 (T79) 19:43	20:15	20:44
8 07:40	15:54 (T87) 07:18		07:36	18:04 (T79) 06:43	05:58	05:34
16:55	30 16:24 (T87) 17:33		19:08	6 18:10 (T79) 19:44	20:16	20:45
9 07:40	15:54 (T87) 07:16		07:34	06:41	05:57	05:34
16:56	30 16:24 (T87) 17:34		19:09	19:45	20:18	20:46
10 07:40	15:54 (T87) 07:15		07:33	06:39	05:55	05:34
16:57	30 16:24 (T87) 17:36		19:11	19:46	20:19	20:46
11 07:40	15:54 (T87) 07:14		07:31	06:38	05:54	05:33
16:58	31 16:25 (T87) 17:37		19:12	19:47	20:20	20:47
12 07:39	15:54 (T87) 07:13		07:29	06:36	05:53	05:33
16:59	31 16:25 (T87) 17:38		19:13	19:48	20:21	20:47
13 07:39	15:55 (T87) 07:11		07:28	06:34	05:52	05:33
17:00	31 16:26 (T87) 17:40		19:14	19:50	20:22	20:48
14 07:38	15:55 (T87) 07:10		07:26	06:33	05:51	05:33
17:01	32 16:27 (T87) 17:41		19:15	19:51	20:23	20:48
15 07:38	15:55 (T87) 07:09		07:24	06:31	05:50	05:33
17:03	32 16:27 (T87) 17:42		19:17	19:52	20:24	20:49
16 07:38	15:56 (T87) 07:07	17:06 (T79)	07:22	06:29	05:49	05:33
17:04	32 16:28 (T87) 17:43	6 17:12 (T79)	19:18	19:53	20:25	13 06:38 (T64)
17 07:37	15:56 (T87) 07:06	17:02 (T79)	07:21	06:28	05:48	06:22 (T64)
17:05	31 16:27 (T87) 17:45	15 17:17 (T79)	19:19	19:54	20:26	19 06:41 (T64)
18 07:37	15:56 (T87) 07:04	16:59 (T79)	07:19	06:26	05:47	06:20 (T64)
17:06	31 16:27 (T87) 17:46	19 17:18 (T79)	19:20	19:55	20:27	23 06:43 (T64)
19 07:36	15:57 (T87) 07:03	16:58 (T79)	07:17	06:25	05:46	06:18 (T64)
17:07	31 16:28 (T87) 17:47	22 17:20 (T79)	19:21	19:56	20:28	26 06:44 (T64)
20 07:35	15:58 (T87) 07:01	16:56 (T79)	07:15	06:23	05:45	06:17 (T64)
17:09	30 16:28 (T87) 17:49	25 17:21 (T79)	19:22	19:57	20:29	28 06:45 (T64)
21 07:35	15:58 (T87) 07:00	16:56 (T79)	07:14	06:22	05:44	06:16 (T64)
17:10	30 16:28 (T87) 17:50	26 17:22 (T79)	19:23	19:59	20:30	31 06:47 (T64)
22 07:34	15:59 (T87) 06:58	16:54 (T79)	07:12	06:20	05:43	06:15 (T64)
17:11	29 16:28 (T87) 17:51	29 17:23 (T79)	19:25	20:00	20:31	33 06:48 (T64)
23 07:33	16:00 (T87) 06:57	16:54 (T79)	07:10	06:19	05:43	06:14 (T64)
17:12	28 16:28 (T87) 17:52	30 17:24 (T79)	19:26	20:00	20:32	35 06:49 (T64)
24 07:33	16:01 (T87) 06:55	16:53 (T79)	07:09	06:17	05:42	06:13 (T64)
17:14	26 16:27 (T87) 17:54	30 17:23 (T79)	19:27	20:01	20:33	36 06:49 (T64)
25 07:32	16:01 (T87) 06:54	16:54 (T79)	07:07	06:16	05:41	06:13 (T64)
17:15	26 16:27 (T87) 17:55	30 17:24 (T79)	19:28	20:02	20:34	38 06:51 (T64)
26 07:31	16:02 (T87) 06:52	16:53 (T79)	07:05	06:14	05:40	06:12 (T64)
17:16	24 16:26 (T87) 17:56	31 17:24 (T79)	19:29	20:03	20:35	39 06:51 (T64)
27 07:30	16:04 (T87) 06:51	16:53 (T79)	07:03	06:13	05:40	06:12 (T64)
17:17	21 16:25 (T87) 17:57	31 17:24 (T79)	19:30	20:04	20:36	40 06:52 (T64)
28 07:29	16:05 (T87) 06:49	16:53 (T79)	07:02	06:11	05:39	06:12 (T64)
17:19	19 16:24 (T87) 17:59	30 17:23 (T79)	19:31	20:05	20:37	41 06:53 (T64)
29 07:28	16:07 (T87)		07:00	06:10	05:38	06:11 (T64)
17:20	16 16:23 (T87)		19:33	20:06	20:37	42 06:53 (T64)
30 07:27	16:10 (T87)		06:58	06:08	05:38	06:11 (T64)
17:21	11 16:21 (T87)		19:34	20:08	20:38	43 06:54 (T64)
31 07:26			06:56		05:37	06:10 (T64)
17:23			19:35		20:39	44 06:54 (T64)
Potential sun hours	294	295	370	401	452	457
Total, worst case	830	324	174		531	1411
Sun reduction	0.39	0.42	0.44		0.55	0.59
Oper. time red.	1.00	1.00	1.00		1.00	1.00
Wind dir. red.	0.69	0.69	0.69		0.69	0.69
Total reduction	0.27	0.29	0.30		0.38	0.41
Total, real	223	94	53		203	577

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

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

Project:

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217 Montgomery St.
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(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 584 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (477)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December	
1 05:37	06:15 (T64) 06:02	06:35 07:07		06:43	07:20	
20:52	47 07:02 (T64) 20:32	19:46 18:54		17:05	16:39 31	
2 05:38	06:15 (T64) 06:03	06:36 07:08		06:45	07:21	
20:52	47 07:02 (T64) 20:31	19:44 18:52		17:04	16:39 30	
3 05:38	06:15 (T64) 06:04	06:37 07:09		06:46	07:22	
20:52	47 07:02 (T64) 20:30	19:43 18:50		17:02	16:39 30	
4 05:39	06:16 (T64) 06:05	06:38 07:10		06:47	07:23	
20:51	47 07:03 (T64) 20:29	19:41 18:48		17:01	16:38 30	
5 05:39	06:16 (T64) 06:06	06:39 07:12		06:48	07:24	
20:51	46 07:02 (T64) 20:28	19:39 18:47		17:00	16:38 30	
6 05:40	06:16 (T64) 06:08	06:40 07:13	17:38 (T79)	06:50	07:25	
20:51	47 07:03 (T64) 20:27	19:38 18:45	11 17:49 (T79)	16:59	07:25	
7 05:41	06:17 (T64) 06:09	06:41 07:14	17:34 (T79)	06:51	07:26	
20:51	46 07:03 (T64) 20:25	19:36 18:43	18 17:52 (T79)	16:58	07:26	
8 05:41	06:17 (T64) 06:10	06:42 07:15	17:32 (T79)	06:52	07:27	
20:50	45 07:02 (T64) 20:24	19:34 18:42	21 17:53 (T79)	16:56	07:28	
9 05:42	06:17 (T64) 06:11	06:44 07:16	17:30 (T79)	06:53	07:28	
20:50	46 07:03 (T64) 20:23	19:32 18:40	24 17:54 (T79)	16:55	07:28	
10 05:43	06:18 (T64) 06:12	06:45 07:17	17:29 (T79)	06:55	07:29	
20:50	45 07:03 (T64) 20:21	19:31 18:38	27 17:56 (T79)	16:54	07:29	
11 05:43	06:18 (T64) 06:13	06:46 07:18	17:28 (T79)	06:56	07:30	
20:49	44 07:02 (T64) 20:20	19:29 18:37	28 17:56 (T79)	16:53	07:30	
12 05:44	06:19 (T64) 06:14	06:47 07:19	17:27 (T79)	06:57	15:41 (T87) 07:30	
20:49	43 07:02 (T64) 20:19	19:27 18:35	29 17:56 (T79)	16:52	12 15:53 (T87) 07:30	
13 05:45	06:19 (T64) 06:15	06:48 07:21	17:26 (T79)	06:58	15:39 (T87) 07:31	
20:48	43 07:02 (T64) 20:17	19:25 18:33	30 17:56 (T79)	16:51	16 15:55 (T87) 07:31	
14 05:46	06:20 (T64) 06:16	06:49 07:22	17:25 (T79)	07:00	15:38 (T87) 07:32	
20:48	42 07:02 (T64) 20:16	19:24 18:32	31 17:56 (T79)	16:50	19 15:57 (T87) 07:32	
15 05:46	06:20 (T64) 06:17	06:50 07:23	17:26 (T79)	07:01	15:37 (T87) 07:33	
20:47	41 07:01 (T64) 20:15	19:22 18:30	31 17:57 (T79)	16:49	21 15:58 (T87) 07:33	
16 05:47	06:21 (T64) 06:18	06:51 07:24	17:25 (T79)	07:02	15:35 (T87) 07:33	
20:47	40 07:01 (T64) 20:13	19:20 18:28	31 17:56 (T79)	16:48	24 15:59 (T87) 07:33	
17 05:48	06:21 (T64) 06:19	06:52 07:25	17:25 (T79)	07:03	15:35 (T87) 07:34	
20:46	40 07:01 (T64) 20:12	19:18 18:27	31 17:56 (T79)	16:48	26 16:01 (T87) 07:34	
18 05:49	06:22 (T64) 06:20	06:53 07:26	17:25 (T79)	07:05	15:35 (T87) 07:35	
20:45	38 07:00 (T64) 20:10	19:17 18:25	30 17:55 (T79)	16:47	26 16:01 (T87) 07:35	
19 05:50	06:23 (T64) 06:21	06:54 07:28	17:25 (T79)	07:06	15:34 (T87) 07:35	
20:44	37 07:00 (T64) 20:09	19:15 18:24	29 17:54 (T79)	16:46	28 16:02 (T87) 07:35	
20 05:51	06:24 (T64) 06:22	06:55 07:29	17:26 (T79)	07:07	15:34 (T87) 07:36	
20:44	36 07:00 (T64) 20:07	19:13 18:22	28 17:54 (T79)	16:45	29 16:03 (T87) 07:36	
21 05:52	06:25 (T64) 06:23	06:56 07:30	17:27 (T79)	07:08	15:34 (T87) 07:37	
20:43	34 06:59 (T64) 20:06	19:11 18:21	26 17:53 (T79)	16:44	30 16:04 (T87) 07:37	
22 05:53	06:25 (T64) 06:24	06:57 07:31	17:27 (T79)	07:09	15:34 (T87) 07:37	
20:42	32 06:57 (T64) 20:04	19:09 18:19	24 17:51 (T79)	16:44	30 16:04 (T87) 07:37	
23 05:54	06:26 (T64) 06:25	06:58 07:32	17:28 (T79)	07:11	15:33 (T87) 07:38	
20:41	30 06:56 (T64) 20:02	19:08 18:18	21 17:49 (T79)	16:43	31 16:04 (T87) 07:38	
24 05:54	06:28 (T64) 06:27	06:59 07:34	17:31 (T79)	07:12	15:34 (T87) 07:38	
20:40	27 06:55 (T64) 20:01	19:06 18:16	17 17:48 (T79)	16:43	31 16:05 (T87) 07:38	
25 05:55	06:29 (T64) 06:28	07:01 07:35	17:33 (T79)	07:13	15:34 (T87) 07:38	
20:40	25 06:54 (T64) 19:58	19:04 18:15	13 17:46 (T79)	16:42	32 16:06 (T87) 07:38	
26 05:56	06:31 (T64) 06:29	07:02 07:36	17:38 (T79)	07:14	15:34 (T87) 07:39	
20:39	21 06:52 (T64) 19:56	19:02 18:13	2 17:40 (T79)	16:41	32 16:06 (T87) 07:39	
27 05:57	06:33 (T64) 06:30	07:03 07:37	07:15	15:34 (T87) 07:39		
20:38	17 06:50 (T64) 19:54	19:01 18:12	16:41	32 16:06 (T87) 07:39		
28 05:58	06:37 (T64) 06:31	07:04 07:38	07:17	15:34 (T87) 07:39		
20:37	10 06:47 (T64) 19:53	18:59 18:10	16:40	32 16:06 (T87) 07:39		
29 05:59		06:32 07:05	07:40	15:36 (T87) 07:40		
20:36		19:51 18:57	18:09	16:40	31 16:07 (T87) 07:40	
30 06:00		06:33 07:06	07:41	15:36 (T87) 07:40		
20:35		19:50 18:55	18:08	16:40	31 16:07 (T87) 07:40	
31 06:01		06:34 07:07	07:42		07:40	
20:34		19:48 18:06	18:06		16:47	26 16:17 (T87)
Potential sun hours	464	431	375	343	294	283
Total, worst case	1063			502	513	820
Sun reduction	0.64			0.45	0.29	0.28
Oper. time red.	1.00			1.00	1.00	1.00
Wind dir. red.	0.69			0.69	0.69	0.69
Total reduction	0.44			0.31	0.20	0.19
Total, real	472			155	102	158

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

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

Printed/Page
10/11/2017 10:32 AM / 28
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 585 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (478)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	15:46 (T87) 07:25	06:48	16:55 (T79) 06:55	06:07	05:37
2	07:40	15:46 (T87) 07:24	06:46	16:55 (T79) 06:53	06:06	05:36
3	07:41	15:46 (T87) 07:23	06:44	16:55 (T79) 06:51	06:04	05:36
4	07:41	15:46 (T87) 07:22	06:43	16:54 (T79) 06:49	06:03	05:35
5	07:41	15:46 (T87) 07:21	06:41	16:55 (T79) 06:48	06:02	05:35
6	07:40	15:46 (T87) 07:20	06:39	16:55 (T79) 06:46	06:00	05:35
7	07:40	15:47 (T87) 07:19	06:38	16:55 (T79) 06:44	05:59	05:34
8	07:40	15:47 (T87) 07:18	06:36	17:57 (T79) 06:43	05:58	05:34
9	07:40	15:48 (T87) 07:16	06:34	17:57 (T79) 06:41	05:57	05:34
10	07:40	15:48 (T87) 07:15	06:33	18:25 (T79) 06:39	05:55	05:34
11	07:40	15:48 (T87) 07:14	06:31	18:00 (T79) 06:38	05:54	05:33
12	07:39	15:49 (T87) 07:13	06:29	18:02 (T79) 06:36	05:53	05:33
13	07:39	15:49 (T87) 07:11	06:28	18:05 (T79) 06:34	05:52	05:33
14	07:38	15:50 (T87) 07:10	06:26	18:16 (T79) 06:33	05:51	05:33
15	07:38	15:50 (T87) 07:09	06:24	06:31	05:50	05:33
16	07:38	15:51 (T87) 07:07	06:22	06:29	05:49	05:33
17	07:37	15:51 (T87) 07:06	06:21	06:28	05:48	05:33
18	07:37	15:51 (T87) 07:04	06:19	06:26	05:47	05:33
19	07:36	15:52 (T87) 07:03	06:17	06:25	05:46	05:33
20	07:35	15:53 (T87) 07:01	06:15	06:23	05:45	05:33
21	07:35	15:53 (T87) 07:00	06:14	06:22	05:44	05:34
22	07:34	15:55 (T87) 06:58	06:12	06:20	05:43	05:34
23	07:33	15:55 (T87) 06:57	06:10	06:19	05:43	05:34
24	07:33	15:56 (T87) 06:55	06:08	06:17	05:42	05:34
25	07:32	15:57 (T87) 06:54	06:06	06:16	05:41	05:35
26	07:31	15:58 (T87) 06:52	06:04	06:14	05:40	05:35
27	07:30	15:59 (T87) 06:51	06:03	06:13	05:40	05:35
28	07:29	16:01 (T87) 06:49	06:01	06:11	05:39	05:36
29	07:28	16:03 (T87) 06:47	06:00	06:10	05:38	05:36
30	07:27	16:05 (T87) 06:45	05:58	06:08	05:38	05:37
31	07:26	16:09 (T87) 06:43	05:56	06:06	05:38	05:37
Potential sun hours	294	295	370	401	452	457
Total, worst case	974	270	377		478	1213
Sun reduction	0.39	0.42	0.44		0.55	0.59
Oper. time red.	1.00	1.00	1.00		1.00	1.00
Wind dir. red.	0.69	0.69	0.69		0.69	0.69
Total reduction	0.27	0.29	0.30		0.38	0.41
Total, real	261	78	114		182	497

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

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

Printed/Page
10/11/2017 10:32 AM / 29

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 585 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (478)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:37	06:06 (T64)	06:02	06:35	07:07	17:42 (T79)	06:43	07:20	15:30 (T87)
2	05:38	06:06 (T64)	06:03	06:36	07:08	17:39 (T79)	06:45	07:21	15:31 (T87)
3	05:38	06:07 (T64)	06:04	06:37	07:09	17:38 (T79)	06:46	07:22	15:31 (T87)
4	05:39	06:07 (T64)	06:05	06:38	07:10	17:36 (T79)	06:47	07:23	15:32 (T87)
5	05:39	06:08 (T64)	06:06	06:39	07:12	17:34 (T79)	06:48	07:24	15:32 (T87)
6	05:40	06:08 (T64)	06:07	06:40	07:13	17:33 (T79)	06:50	07:25	15:32 (T87)
7	05:41	06:08 (T64)	06:09	06:41	07:14	17:31 (T79)	06:51	07:26	15:33 (T87)
8	05:41	06:08 (T64)	06:10	06:42	07:15	17:30 (T79)	06:52	07:27	15:34 (T87)
9	05:42	06:08 (T64)	06:11	06:44	07:16	17:29 (T79)	06:53	07:28	15:34 (T87)
10	05:43	06:09 (T64)	06:12	06:45	07:17	17:30 (T79)	06:55	07:29	15:35 (T87)
11	05:43	06:09 (T64)	06:13	06:46	07:18	17:29 (T79)	06:56	07:30	15:36 (T87)
12	05:44	06:09 (T64)	06:14	06:47	07:19	17:29 (T79)	06:57	07:31	15:37 (T87)
13	05:45	06:09 (T64)	06:15	06:48	07:21	17:28 (T79)	06:58	07:32	15:38 (T87)
14	05:46	06:10 (T64)	06:16	06:49	07:22	17:28 (T79)	07:00	07:33	15:39 (T87)
15	05:46	06:10 (T64)	06:17	06:50	07:23	17:29 (T79)	07:01	07:34	15:40 (T87)
16	05:47	06:10 (T64)	06:18	06:51	07:24	17:29 (T79)	07:02	07:35	15:41 (T87)
17	05:48	06:11 (T64)	06:19	06:52	07:25	17:30 (T79)	07:03	07:36	15:42 (T87)
18	05:49	06:12 (T64)	06:20	06:53	07:26	17:30 (T79)	07:05	07:37	15:43 (T87)
19	05:50	06:13 (T64)	06:21	06:54	07:28	17:31 (T79)	07:06	07:38	15:44 (T87)
20	05:51	06:14 (T64)	06:22	06:55	07:29	17:33 (T79)	07:07	07:39	15:45 (T87)
21	05:52	06:15 (T64)	06:23	06:56	07:30	17:34 (T79)	07:08	07:40	15:46 (T87)
22	05:53	06:15 (T64)	06:24	06:57	07:31	17:36 (T79)	07:09	07:41	15:47 (T87)
23	05:54	06:16 (T64)	06:25	06:58	07:32	17:39 (T79)	07:11	07:42	15:48 (T87)
24	05:54	06:17 (T64)	06:27	06:59	07:34	17:48 (T79)	07:12	07:43	15:49 (T87)
25	05:55	06:18 (T64)	06:28	07:01	07:35	17:48 (T79)	07:13	07:44	15:50 (T87)
26	05:56	06:19 (T64)	06:29	07:02	07:36	17:48 (T79)	07:14	07:45	15:51 (T87)
27	05:57	06:21 (T64)	06:30	07:03	07:37	17:48 (T79)	07:15	07:46	15:52 (T87)
28	05:58	06:22 (T64)	06:31	07:04	07:38	17:48 (T79)	07:16	07:47	15:53 (T87)
29	05:59	06:23 (T64)	06:32	07:05	07:40	17:48 (T79)	07:18	07:48	15:54 (T87)
30	06:00	06:24 (T64)	06:33	07:06	07:41	17:48 (T79)	07:19	07:49	15:55 (T87)
31	06:01	06:24 (T64)	06:34	07:07	07:42	17:48 (T79)	07:20	07:50	15:56 (T87)
Potential sun hours	464	431	375	343	294	283			
Total, worst case	937		4	648	588	1055			
Sun reduction	0.64		0.53	0.45	0.29	0.28			
Oper. time red.	1.00		1.00	1.00	1.00	1.00			
Wind dir. red.	0.69		0.69	0.69	0.69	0.69			
Total reduction	0.44		0.36	0.31	0.20	0.19			
Total, real	416		1	200	117	203			

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

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

Project:
Baron_SFA

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10/11/2017 10:32 AM / 30

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 589 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (481)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	07:40	14:19 (T76) 07:25	14:38 (T76) 06:48	06:55	06:07	05:37		
16:48	64	15:23 (T76) 17:24	72	16:55 (T87) 18:00	19:36	20:09	20:40	
2	07:40	14:19 (T76) 07:24	14:40 (T76) 06:46	06:53	06:06	05:36		
16:49	64	15:23 (T76) 17:25	70	16:56 (T87) 18:01	19:37	20:10	20:41	
3	07:41	14:20 (T76) 07:23	14:42 (T76) 06:44	06:51	06:04	05:36		
16:50	64	15:24 (T76) 17:27	69	16:57 (T87) 18:02	19:38	20:11	20:42	
4	07:41	14:19 (T76) 07:22	14:44 (T76) 06:43	06:49	06:03	05:35		
16:51	64	15:23 (T76) 17:28	67	16:58 (T87) 18:03	19:39	20:12	20:42	
5	07:40	14:20 (T76) 07:21	14:46 (T76) 06:41	06:48	06:02	05:35		
16:52	64	15:24 (T76) 17:29	64	16:59 (T87) 18:05	19:40	20:13	20:43	
6	07:40	14:20 (T76) 07:20	14:48 (T76) 06:39	17:32 (T79) 06:46	06:00	05:35		
16:53	65	15:25 (T76) 17:30	62	17:00 (T87) 18:06	1	17:33 (T79) 19:42	20:14	20:44
7	07:40	14:21 (T76) 07:19	14:50 (T76) 06:38	17:25 (T79) 06:44	05:59	05:34		
16:54	64	15:25 (T76) 17:32	57	16:59 (T87) 18:07	14	17:39 (T79) 19:43	20:15	20:44
8	07:40	14:21 (T76) 07:18	14:54 (T76) 07:36	18:23 (T79) 06:43	05:58	05:34		
16:55	65	15:26 (T76) 17:33	51	17:00 (T87) 19:08	18	18:41 (T79) 19:44	20:16	20:45
9	07:40	14:22 (T76) 07:16	15:01 (T76) 07:34	18:21 (T79) 06:41	05:57	05:34		
16:56	65	15:27 (T76) 17:34	38	17:00 (T87) 19:09	22	18:43 (T79) 19:45	20:18	20:46
10	07:40	14:22 (T76) 07:15	16:30 (T87) 07:33	18:19 (T79) 06:39	05:55	05:34		
16:57	64	15:26 (T76) 17:36	30	17:00 (T87) 19:11	24	18:43 (T79) 19:46	20:19	20:46
11	07:40	14:23 (T76) 07:14	16:29 (T87) 07:31	18:19 (T79) 06:38	05:54	05:33		
16:58	64	15:27 (T76) 17:37	31	17:00 (T87) 19:12	26	18:45 (T79) 19:47	20:20	20:47
12	07:39	14:23 (T76) 07:13	16:30 (T87) 07:29	18:17 (T79) 06:36	05:53	05:33		
16:59	64	15:27 (T76) 17:38	30	17:00 (T87) 19:13	28	18:45 (T79) 19:48	20:21	20:47
13	07:39	14:23 (T76) 07:11	16:30 (T87) 07:28	18:16 (T79) 06:34	05:52	05:33		
17:00	65	15:28 (T76) 17:40	29	16:59 (T87) 19:14	29	18:45 (T79) 19:50	20:22	20:48
14	07:38	14:24 (T76) 07:10	16:31 (T87) 07:26	18:16 (T79) 06:33	05:51	05:33		
17:01	64	15:28 (T76) 17:41	27	16:58 (T87) 19:15	29	18:45 (T79) 19:51	20:23	20:48
15	07:38	14:24 (T76) 07:08	16:32 (T87) 07:24	18:16 (T79) 06:31	05:50	05:33		
17:03	64	15:28 (T76) 17:42	26	16:58 (T87) 19:17	29	18:45 (T79) 19:52	20:24	20:49
16	07:38	14:25 (T76) 07:07	16:33 (T87) 07:22	18:15 (T79) 06:29	05:49	05:33		
17:04	64	15:29 (T76) 17:43	23	16:56 (T87) 19:18	30	18:45 (T79) 19:53	20:25	20:49
17	07:37	14:25 (T76) 07:06	16:35 (T87) 07:21	18:15 (T79) 06:28	05:48	05:33		
17:05	64	15:29 (T76) 17:45	20	16:55 (T87) 19:19	29	18:44 (T79) 19:54	20:26	20:50
18	07:37	14:26 (T76) 07:04	16:36 (T87) 07:19	18:15 (T79) 06:26	05:47	05:33		
17:06	63	15:29 (T76) 17:46	17	16:53 (T87) 19:20	28	18:43 (T79) 19:55	20:27	20:50
19	07:36	14:27 (T76) 07:03	16:39 (T87) 07:17	18:16 (T79) 06:25	05:46	05:33		
17:07	62	15:29 (T76) 17:47	12	16:51 (T87) 19:21	27	18:43 (T79) 19:56	20:28	20:50
20	07:35	14:27 (T76) 07:01	07:15	18:16 (T79) 06:23	05:45	05:33		
17:09	62	15:29 (T76) 17:49	19:22	26	18:42 (T79) 19:57	20:29	20:51	
21	07:35	14:28 (T76) 07:00	07:14	18:17 (T79) 06:22	05:44	05:34		
17:10	61	15:29 (T76) 17:50	19:23	23	18:40 (T79) 19:59	20:30	20:51	
22	07:34	14:29 (T76) 06:58	07:12	18:18 (T79) 06:20	05:43	05:34		
17:11	61	15:30 (T76) 17:51	19:25	20	18:38 (T79) 20:00	20:31	20:51	
23	07:33	14:29 (T76) 06:57	07:10	18:20 (T79) 06:19	05:43	05:34		
17:12	61	15:30 (T76) 17:52	19:26	17	18:37 (T79) 20:00	20:32	20:51	
24	07:33	14:30 (T76) 06:55	07:09	18:22 (T79) 06:17	05:42	05:34		
17:14	59	15:29 (T76) 17:54	19:27	12	18:34 (T79) 20:01	20:33	20:52	
25	07:32	14:31 (T76) 06:54	07:07	18:24 (T79) 06:16	05:41	05:35		
17:15	58	15:29 (T76) 17:55	19:28	20:02	20:34	20:52		
26	07:31	14:31 (T76) 06:52	07:05	18:26 (T79) 06:14	05:40	05:35		
17:16	58	15:29 (T76) 17:56	19:29	20:03	20:35	20:52		
27	07:30	14:32 (T76) 06:51	07:03	18:28 (T79) 06:13	05:40	05:35		
17:17	59	16:44 (T87) 17:57	19:30	20:04	20:36	20:52		
28	07:29	14:33 (T76) 06:49	07:02	18:30 (T79) 06:11	05:39	05:36		
17:19	66	16:48 (T87) 17:59	19:31	20:05	20:37	20:52		
29	07:28	14:34 (T76) 06:48	07:00	18:32 (T79) 06:10	05:38	05:36		
17:20	69	16:51 (T87) 17:59	19:33	20:06	20:37	20:52		
30	07:27	14:35 (T76) 06:47	06:58	18:34 (T79) 06:08	05:38	05:37		
17:21	72	16:53 (T87) 17:59	19:34	20:08	20:38	20:52		
31	07:26	14:37 (T76) 06:46	06:56	18:36 (T79) 06:06	05:37	05:36		
17:23	71	16:54 (T87) 17:59	19:35	20:09	20:39	20:52		
Potential sun hours	294	295	370	401	452	457		
Total, worst case	1974	795	432					
Sun reduction	0.39	0.42	0.44					
Oper. time red.	1.00	1.00	1.00					
Wind dir. red.	0.67	0.69	0.68					
Total reduction	0.26	0.29	0.30					
Total, real	516	229	129					

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

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

Project:

Baron_SFA

Printed/Page

10/11/2017 10:32 AM / 31

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 589 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (481)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37	06:02	06:35	07:07	17:56 (T79) 06:43	15:58 (T87) 07:20
	20:52	20:32	19:46	18:54	18:24 (T79) 17:05	16:29 (T87) 16:39
2	05:38	06:03	06:36	07:08	17:56 (T79) 06:45	14:29 (T76) 07:21
	20:52	20:31	19:44	18:52	18:23 (T79) 17:04	16:30 (T87) 16:39
3	05:38	06:04	06:37	07:09	17:57 (T79) 06:46	14:23 (T76) 07:22
	20:52	20:30	19:43	18:50	18:23 (T79) 17:02	16:30 (T87) 16:39
4	05:39	06:05	06:38	07:10	17:58 (T79) 06:47	14:20 (T76) 07:23
	20:51	20:29	19:41	18:48	18:21 (T79) 17:01	16:29 (T87) 16:38
5	05:39	06:06	06:39	07:12	17:59 (T79) 06:48	14:18 (T76) 07:24
	20:51	20:28	19:39	18:47	18:19 (T79) 17:00	16:30 (T87) 16:38
6	05:40	06:08	06:40	07:13	18:01 (T79) 06:50	14:15 (T76) 07:25
	20:51	20:27	19:38	18:45	18:17 (T79) 16:59	16:29 (T87) 16:38
7	05:41	06:09	06:41	07:14	18:03 (T79) 06:51	14:13 (T76) 07:26
	20:51	20:25	19:36	18:43	18:03 (T79) 16:58	16:28 (T87) 16:38
8	05:41	06:10	06:42	07:15	18:13 (T79) 06:52	14:12 (T76) 07:27
	20:50	20:24	19:34	18:42	16:56	16:28 (T87) 16:38
9	05:42	06:11	06:44	07:16	06:53	14:11 (T76) 07:28
	20:50	20:23	19:32	18:40	16:55	16:27 (T87) 16:38
10	05:43	06:12	06:45	07:17	06:55	14:09 (T76) 07:29
	20:50	20:21	19:31	18:38	16:54	16:26 (T87) 16:38
11	05:43	06:13	06:46	07:18	06:56	14:09 (T76) 07:30
	20:49	20:20	19:29	18:37	16:53	16:26 (T87) 16:38
12	05:44	06:14	06:47	07:19	06:57	14:07 (T76) 07:30
	20:49	20:19	19:27	18:35	16:52	16:24 (T87) 16:38
13	05:45	06:15	06:48	07:21	06:58	14:06 (T76) 07:31
	20:48	20:17	19:25	18:33	16:51	16:23 (T87) 16:38
14	05:46	06:16	06:49	07:22	07:00	14:06 (T76) 07:32
	20:48	20:16	19:24	18:32	16:50	16:21 (T87) 16:38
15	05:46	06:17	06:50	07:23	07:01	14:05 (T76) 07:33
	20:47	20:15	19:22	18:30	16:49	16:16 (T87) 16:39
16	05:47	06:18	06:51	07:24	07:02	14:04 (T76) 07:33
	20:47	20:13	19:20	18:28	16:48	15:02 (T76) 16:39
17	05:48	06:19	06:52	07:25	07:03	14:05 (T76) 07:34
	20:46	20:12	19:18	18:27	16:48	15:03 (T76) 16:39
18	05:49	06:20	06:53	07:26	07:05	14:04 (T76) 07:35
	20:45	20:10	19:17	18:25	16:47	15:03 (T76) 16:39
19	05:50	06:21	06:54	18:09 (T79) 07:28	07:06	14:03 (T76) 07:35
	20:44	20:09	19:15	18:19 (T79) 18:24	16:46	15:04 (T76) 16:40
20	05:51	06:22	06:55	18:07 (T79) 07:29	07:07	14:04 (T76) 07:36
	20:44	20:07	19:13	18:23 (T79) 18:22	16:45	15:05 (T76) 16:40
21	05:52	06:23	06:56	18:04 (T79) 07:30	07:08	14:04 (T76) 07:37
	20:43	20:06	19:11	18:24 (T79) 18:21	16:44	15:05 (T76) 16:41
22	05:53	06:24	06:57	18:03 (T79) 07:31	17:13 (T87) 07:09	14:03 (T76) 07:37
	20:42	20:04	19:09	18:25 (T79) 18:19	3 17:16 (T87) 16:44	15:05 (T76) 16:41
23	05:54	06:25	06:58	18:01 (T79) 07:32	17:08 (T87) 07:11	14:03 (T76) 07:38
	20:41	20:02	19:08	18:26 (T79) 18:18	13 17:21 (T87) 16:43	15:05 (T76) 16:42
24	05:54	06:27	06:59	18:00 (T79) 07:34	17:06 (T87) 07:12	14:04 (T76) 07:38
	20:40	20:01	19:06	18:26 (T79) 18:16	18 17:24 (T87) 16:43	15:07 (T76) 16:42
25	05:55	06:28	07:01	17:59 (T79) 07:35	17:04 (T87) 07:13	14:04 (T76) 07:38
	20:40	19:58	19:04	18:27 (T79) 18:15	21 17:25 (T87) 16:42	15:07 (T76) 16:43
26	05:56	06:29	07:02	17:58 (T79) 07:36	17:02 (T87) 07:14	14:03 (T76) 07:39
	20:39	19:56	19:02	18:27 (T79) 18:13	24 17:26 (T87) 16:41	15:07 (T76) 16:44
27	05:57	06:30	07:03	17:57 (T79) 07:37	17:02 (T87) 07:15	14:03 (T76) 07:39
	20:38	19:54	19:01	18:26 (T79) 18:12	26 17:28 (T87) 16:41	15:07 (T76) 16:44
28	05:58	06:31	07:04	17:56 (T79) 07:38	17:01 (T87) 07:16	14:03 (T76) 07:39
	20:37	19:53	18:59	18:26 (T79) 18:10	27 17:28 (T87) 16:40	15:07 (T76) 16:45
29	05:59	06:32	07:05	17:56 (T79) 07:40	17:00 (T87) 07:18	14:04 (T76) 07:40
	20:36	19:51	18:57	18:25 (T79) 18:09	28 17:28 (T87) 16:40	15:09 (T76) 16:46
30	06:00	06:33	07:06	17:56 (T79) 07:41	17:00 (T87) 07:19	14:05 (T76) 07:40
	20:35	19:50	18:55	18:25 (T79) 18:08	29 17:29 (T87) 16:40	15:09 (T76) 16:46
31	06:01	06:34		07:42	16:59 (T87)	07:40
	20:34	19:48		18:06	30 17:29 (T87)	16:47
Potential sun hours	464	431	375	343	294	283
Total, worst case			293	369	1853	1974
Sun reduction			0.53	0.45	0.29	0.28
Oper. time red.			1.00	1.00	1.00	1.00
Wind dir. red.			0.68	0.69	0.68	0.67
Total reduction			0.36	0.31	0.20	0.19
Total, real			105	114	362	370

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

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

Printed/Page
10/11/2017 10:32 AM / 32

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 592 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (483)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40 16:48	07:25 17:24	15:17 (T68) 06:47 16:13 (T68) 18:00	15:23 (T68) 06:55 16:11 (T68) 19:36	18:00 (T76) 06:07 18:38 (T76) 20:09	05:37 20:40
2	07:40 16:49	07:24 17:25	15:17 (T68) 06:46 16:14 (T68) 18:01	15:26 (T68) 06:53 16:10 (T68) 19:37	18:00 (T76) 06:06 18:37 (T76) 20:10	05:36 20:41
3	07:40 16:50	07:23 17:27	15:16 (T68) 06:44 16:15 (T68) 18:02	15:27 (T68) 06:51 16:08 (T68) 19:38	18:00 (T76) 06:04 18:36 (T76) 20:11	05:36 20:42
4	07:40 16:51	07:22 17:28	15:16 (T68) 06:43 16:16 (T68) 18:03	15:29 (T68) 06:49 16:06 (T68) 19:39	18:02 (T76) 06:03 18:35 (T76) 20:12	05:35 20:42
5	07:40 16:52	07:21 17:29	15:16 (T68) 06:41 16:17 (T68) 18:05	15:32 (T68) 06:48 16:04 (T68) 19:40	18:02 (T76) 06:02 18:33 (T76) 20:13	05:35 20:43
6	07:40 16:53	07:20 17:30	15:16 (T68) 06:39 16:18 (T68) 18:06	15:34 (T68) 06:46 16:01 (T68) 19:42	18:03 (T76) 06:00 18:31 (T76) 20:14	05:35 20:44
7	07:40 16:54	07:19 17:32	15:15 (T68) 06:38 16:18 (T68) 18:07	15:38 (T68) 06:44 15:57 (T68) 19:43	18:06 (T76) 05:59 18:30 (T76) 20:15	05:34 20:44
8	07:40 16:55	07:18 17:33	15:15 (T68) 06:36 16:18 (T68) 19:08	15:43 (T68) 06:43 15:57 (T68) 19:44	18:07 (T76) 05:58 18:27 (T76) 20:16	05:34 20:45
9	07:40 16:56	07:16 17:34	15:15 (T68) 07:34 16:19 (T68) 19:09	18:40 (T87) 06:41 18:44 (T87) 19:45	18:10 (T76) 05:57 18:23 (T76) 20:17	05:34 20:46
10	07:40 16:57	07:15 17:36	15:14 (T68) 07:33 16:19 (T68) 19:11	18:35 (T87) 06:39 18:48 (T87) 19:46	18:23 (T76) 05:55 18:23 (T76) 20:17	05:34 20:46
11	07:39 16:58	07:14 17:37	15:14 (T68) 07:31 16:19 (T68) 19:12	18:34 (T87) 06:38 18:50 (T87) 19:47	18:23 (T76) 05:54 18:23 (T76) 20:17	05:33 20:47
12	07:39 16:59	07:12 17:38	15:14 (T68) 07:29 16:20 (T68) 19:13	18:32 (T87) 06:36 18:51 (T87) 19:48	18:23 (T76) 05:53 18:23 (T76) 20:17	05:33 20:47
13	07:39 17:00	07:11 17:40	15:14 (T68) 07:28 16:20 (T68) 19:13	18:30 (T87) 06:34 18:51 (T87) 19:49	18:23 (T76) 05:52 18:23 (T76) 20:17	05:33 20:48
14	07:38 17:01	07:10 17:41	15:14 (T68) 07:26 16:20 (T68) 19:15	18:19 (T76) 06:33 18:51 (T87) 19:51	18:23 (T76) 05:51 18:23 (T76) 20:17	05:33 20:48
15	07:38 17:03	07:08 17:42	15:15 (T68) 07:24 16:20 (T68) 19:17	18:15 (T76) 06:31 18:52 (T87) 19:52	18:23 (T76) 05:50 18:23 (T76) 20:17	05:33 20:49
16	07:38 17:04	07:07 17:43	15:14 (T68) 07:22 16:20 (T68) 19:18	18:12 (T76) 06:29 18:52 (T87) 19:53	18:23 (T76) 05:49 18:23 (T76) 20:17	05:33 20:49
17	07:37 17:05	07:06 17:45	15:15 (T68) 07:21 16:20 (T68) 19:19	18:09 (T76) 06:28 18:51 (T87) 19:54	18:23 (T76) 05:48 18:23 (T76) 20:17	05:33 20:50
18	07:37 17:06	15:34 (T68) 07:04 15:49 (T68) 17:46	15:15 (T68) 07:19 16:19 (T68) 19:20	18:07 (T76) 06:26 18:50 (T87) 19:55	18:23 (T76) 05:47 18:23 (T76) 20:17	05:33 20:50
19	07:36 17:07	15:32 (T68) 07:03 15:53 (T68) 17:47	15:15 (T68) 07:17 16:19 (T68) 19:21	18:06 (T76) 06:25 18:50 (T87) 19:56	18:23 (T76) 05:46 18:23 (T76) 20:17	05:33 20:50
20	07:35 17:09	15:30 (T68) 07:01 15:55 (T68) 17:49	15:15 (T68) 07:15 16:19 (T68) 19:22	18:04 (T76) 06:23 18:49 (T87) 19:57	18:23 (T76) 05:45 18:23 (T76) 20:17	05:33 20:51
21	07:35 17:10	15:28 (T68) 07:00 15:57 (T68) 17:50	15:16 (T68) 07:14 16:19 (T68) 19:23	18:03 (T76) 06:22 18:47 (T87) 19:59	18:23 (T76) 05:44 18:23 (T76) 20:17	05:34 20:51
22	07:34 17:11	15:27 (T68) 06:58 16:00 (T68) 17:51	15:16 (T68) 07:12 16:18 (T68) 19:25	18:02 (T76) 06:20 18:45 (T87) 20:00	18:23 (T76) 05:43 18:23 (T76) 20:17	05:34 20:51
23	07:33 17:12	15:25 (T68) 06:57 16:02 (T68) 17:52	15:18 (T68) 07:10 16:18 (T68) 19:26	18:02 (T76) 06:18 18:43 (T87) 20:00	18:23 (T76) 05:43 18:23 (T76) 20:17	05:34 20:51
24	07:33 17:14	15:24 (T68) 06:55 16:03 (T68) 17:54	15:18 (T68) 07:08 16:16 (T68) 19:27	18:01 (T76) 06:17 18:42 (T76) 20:01	18:23 (T76) 05:42 18:23 (T76) 20:17	05:34 20:52
25	07:32 17:15	15:23 (T68) 06:54 16:05 (T68) 17:55	15:19 (T68) 07:07 16:16 (T68) 19:28	18:00 (T76) 06:15 18:41 (T76) 20:02	18:23 (T76) 05:41 18:23 (T76) 20:17	05:35 20:52
26	07:31 17:16	15:22 (T68) 06:52 16:06 (T68) 17:56	15:20 (T68) 07:05 16:15 (T68) 19:29	17:59 (T76) 06:14 18:41 (T76) 20:03	18:23 (T76) 05:40 18:23 (T76) 20:17	05:35 20:52
27	07:30 17:17	15:21 (T68) 06:51 16:08 (T68) 17:57	15:22 (T68) 07:03 16:14 (T68) 19:30	18:00 (T76) 06:13 18:42 (T76) 20:04	18:23 (T76) 05:40 18:23 (T76) 20:17	05:35 20:52
28	07:29 17:19	15:20 (T68) 06:49 16:09 (T68) 17:59	15:22 (T68) 07:02 16:13 (T68) 19:31	17:59 (T76) 06:11 18:41 (T76) 20:05	18:23 (T76) 05:39 18:23 (T76) 20:17	05:36 20:52
29	07:28 17:20	15:19 (T68) 06:48 16:10 (T68) 17:59	15:22 (T68) 07:01 16:13 (T68) 19:32	17:59 (T76) 06:10 18:40 (T76) 20:06	18:23 (T76) 05:38 18:23 (T76) 20:17	05:36 20:52
30	07:27 17:21	15:18 (T68) 06:47 16:11 (T68) 17:59	15:22 (T68) 07:00 16:13 (T68) 19:33	17:59 (T76) 06:08 18:39 (T76) 20:08	18:23 (T76) 05:38 18:23 (T76) 20:17	05:37 20:52
31	07:26 17:23	15:18 (T68) 06:46 16:12 (T68) 17:59	15:22 (T68) 07:00 16:13 (T68) 19:34	17:59 (T76) 06:08 18:00 (T76) 20:08	18:23 (T76) 05:38 18:39 (T76) 20:08	05:37 20:52
Potential sun hours	294	295	370	401	452	457
Total, worst case	539	1718	1059	260		
Sun reduction	0.39	0.42	0.44	0.51		
Oper. time red.	1.00	1.00	1.00	1.00		
Wind dir. red.	0.69	0.69	0.68	0.68		
Total reduction	0.27	0.29	0.30	0.35		
Total, real	145	497	317	90		

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

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

Project:

Baron_SFA

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10/11/2017 10:32 AM / 33

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 592 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (483)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	05:37	06:02	06:35	07:07	18:10 (T87)	06:43	
	20:52	20:32	19:46	18:54	20 18:30 (T87)	17:05	
2	05:38	06:03	06:36	07:08	18:11 (T87)	06:45	
	20:52	20:31	19:44	18:52	17 18:28 (T87)	17:04	
3	05:38	06:04	06:37	18:08 (T76)	07:09	18:13 (T87)	06:46
	20:52	20:30	19:43	13 18:21 (T76)	18:50	14 18:27 (T87)	17:02
4	05:39	06:05	06:38	18:04 (T76)	07:10	18:15 (T87)	06:47
	20:51	20:29	19:41	20 18:24 (T76)	18:48	9 18:24 (T87)	17:01
5	05:39	06:06	06:39	18:02 (T76)	07:11	06:48	17:00
	20:51	20:28	19:39	24 18:26 (T76)	18:47	62 15:48 (T68)	16:38
6	05:40	06:07	06:40	17:59 (T76)	07:13	16:17 (T68)	06:50
	20:51	20:27	19:38	28 18:27 (T76)	18:45	14 16:31 (T68)	16:59
7	05:41	06:09	06:41	17:58 (T76)	07:14	16:12 (T68)	06:51
	20:51	20:25	19:36	30 18:28 (T76)	18:43	23 16:35 (T68)	16:58
8	05:41	06:10	06:42	17:56 (T76)	07:15	16:08 (T68)	06:52
	20:50	20:24	19:34	33 18:29 (T76)	18:42	30 16:38 (T68)	16:56
9	05:42	06:11	06:44	17:54 (T76)	07:16	16:05 (T68)	06:53
	20:50	20:23	19:32	36 18:30 (T76)	18:40	34 16:39 (T68)	16:55
10	05:43	06:12	06:45	17:53 (T76)	07:17	16:03 (T68)	06:55
	20:50	20:21	19:31	37 18:30 (T76)	18:38	39 16:42 (T68)	16:54
11	05:43	06:13	06:46	17:52 (T76)	07:18	16:00 (T68)	06:56
	20:49	20:20	19:29	38 18:30 (T76)	18:37	43 16:43 (T68)	16:53
12	05:44	06:14	06:47	17:51 (T76)	07:19	15:58 (T68)	06:57
	20:49	20:19	19:27	40 18:31 (T76)	18:35	46 16:44 (T68)	16:52
13	05:45	06:15	06:48	17:50 (T76)	07:21	15:56 (T68)	06:58
	20:48	20:17	19:25	41 18:31 (T76)	18:33	49 16:45 (T68)	16:51
14	05:46	06:16	06:49	17:49 (T76)	07:22	15:54 (T68)	07:00
	20:48	20:16	19:24	41 18:30 (T76)	18:32	52 16:46 (T68)	16:50
15	05:46	06:17	06:50	17:48 (T76)	07:23	15:52 (T68)	07:01
	20:47	20:14	19:22	42 18:30 (T76)	18:30	54 16:46 (T68)	16:49
16	05:47	06:18	06:51	17:48 (T76)	07:24	15:52 (T68)	07:02
	20:46	20:13	19:20	42 18:30 (T76)	18:28	56 16:48 (T68)	16:48
17	05:48	06:19	06:52	17:47 (T76)	07:25	15:50 (T68)	07:03
	20:46	20:12	19:18	42 18:29 (T76)	18:27	58 16:48 (T68)	16:48
18	05:49	06:20	06:53	17:47 (T76)	07:26	15:49 (T68)	07:05
	20:45	20:10	19:17	42 18:29 (T76)	18:25	59 16:48 (T68)	16:47
19	05:50	06:21	06:54	17:47 (T76)	07:28	15:48 (T68)	07:06
	20:44	20:09	19:15	41 18:28 (T76)	18:24	60 16:48 (T68)	16:46
20	05:51	06:22	06:55	17:48 (T76)	07:29	15:48 (T68)	07:07
	20:44	20:07	19:13	40 18:28 (T76)	18:22	61 16:49 (T68)	16:45
21	05:52	06:23	06:56	17:48 (T76)	07:30	15:47 (T68)	07:08
	20:43	20:06	19:11	43 18:31 (T87)	18:21	62 16:49 (T68)	16:44
22	05:53	06:24	06:57	17:48 (T76)	07:31	15:46 (T68)	07:09
	20:42	20:04	19:09	44 18:32 (T87)	18:19	63 16:49 (T68)	16:44
23	05:53	06:25	06:58	17:49 (T76)	07:32	15:45 (T68)	07:11
	20:41	20:02	19:08	44 18:33 (T87)	18:18	64 16:49 (T68)	16:43
24	05:54	06:27	06:59	17:49 (T76)	07:34	15:45 (T68)	07:12
	20:40	20:01	19:06	45 18:34 (T87)	18:16	65 16:50 (T68)	16:43
25	05:55	06:28	07:01	17:50 (T76)	07:35	15:44 (T68)	07:13
	20:40	19:58	19:04	44 18:34 (T87)	18:15	66 16:50 (T68)	16:42
26	05:56	06:29	07:02	17:51 (T76)	07:36	15:44 (T68)	07:14
	20:39	19:56	19:02	43 18:34 (T87)	18:13	65 16:49 (T68)	16:41
27	05:57	06:30	07:03	17:52 (T76)	07:37	15:44 (T68)	07:15
	20:38	19:54	19:01	41 18:33 (T87)	18:12	66 16:50 (T68)	16:41
28	05:58	06:31	07:04	17:54 (T76)	07:38	15:44 (T68)	07:16
	20:37	19:53	18:59	39 18:33 (T87)	18:10	65 16:49 (T68)	16:40
29	05:59	06:32	07:05	17:57 (T76)	07:40	15:43 (T68)	07:18
	20:36	19:51	18:57	35 18:32 (T87)	18:09	66 16:49 (T68)	16:40
30	06:00	06:33	07:06	18:10 (T87)	07:41	15:44 (T68)	07:19
	20:35	19:49	18:55	21 18:31 (T87)	18:08	66 16:50 (T68)	16:40
31	06:01	06:34		07:42	15:44 (T68)		07:40
	20:34	19:48		18:06	65 16:49 (T68)		16:47
Potential sun hours	464	431	375	343	294		283
Total, worst case			1029	1451	1149		
Sun reduction			0.53	0.45	0.29		
Oper. time red.			1.00	1.00	1.00		
Wind dir. red.			0.68	0.69	0.69		
Total reduction			0.36	0.31	0.20		
Total, real			370	450	230		

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

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

Baron_SFA

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10/11/2017 10:32 AM / 34

Licensed user:

EDR

217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 604 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (493)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	15:33 (T69)	07:25	06:47	06:55	06:07
	16:48	29 16:02 (T69)	17:24	18:00	19:36	25 19:06 (T68)
2	07:40	15:34 (T69)	07:24	06:46	06:53	06:06
	16:49	29 16:03 (T69)	17:25	18:01	19:37	28 19:07 (T68)
3	07:40	15:34 (T69)	07:23	06:44	06:51	06:04
	16:50	28 16:02 (T69)	17:27	18:02	19:38	30 19:08 (T68)
4	07:40	15:34 (T69)	07:22	06:43	06:49	06:03
	16:51	29 16:03 (T69)	17:28	18:03	19:39	33 19:09 (T68)
5	07:40	15:35 (T69)	07:21	06:41	06:48	06:02
	16:52	28 16:03 (T69)	17:29	18:05	19:40	35 19:10 (T68)
6	07:40	15:36 (T69)	07:20	06:39	06:46	06:00
	16:53	27 16:03 (T69)	17:30	18:06	19:42	44 19:11 (T68)
7	07:40	15:37 (T69)	07:19	06:38	06:44	05:59
	16:54	27 16:04 (T69)	17:32	18:07	19:43	47 19:12 (T68)
8	07:40	15:38 (T69)	07:18	06:36	06:43	05:58
	16:55	26 16:04 (T69)	17:33	18:08	19:44	50 19:13 (T68)
9	07:40	15:38 (T69)	07:16	06:34	06:41	05:57
	16:56	25 16:03 (T69)	17:34	18:09	19:45	51 19:14 (T68)
10	07:40	15:39 (T69)	07:15	06:33	06:39	05:55
	16:57	25 16:04 (T69)	17:36	18:11	19:46	52 19:15 (T68)
11	07:39	15:40 (T69)	07:14	06:31	06:38	05:54
	16:58	24 16:04 (T69)	17:37	18:12	19:47	54 19:16 (T68)
12	07:39	15:41 (T69)	07:12	06:29	06:36	05:53
	16:59	22 16:03 (T69)	17:38	18:13	19:48	55 19:17 (T68)
13	07:39	15:42 (T69)	07:11	06:28	06:34	05:52
	17:00	21 16:03 (T69)	17:40	18:14	19:49	55 19:18 (T68)
14	07:38	15:44 (T69)	07:10	06:26	06:33	05:51
	17:01	19 16:03 (T69)	17:41	18:15	19:51	56 19:19 (T68)
15	07:38	15:45 (T69)	07:08	06:24	06:31	05:50
	17:03	17 16:02 (T69)	17:42	18:16	19:52	56 19:20 (T68)
16	07:38	15:46 (T69)	07:07	06:22	06:29	05:49
	17:04	15 16:01 (T69)	17:43	18:18	19:53	56 19:21 (T68)
17	07:37	15:48 (T69)	07:06	06:21	06:28	05:48
	17:05	12 16:00 (T69)	17:45	18:19	19:54	56 19:22 (T68)
18	07:36	15:51 (T69)	07:04	06:19	06:26	05:47
	17:06	7 15:58 (T69)	17:46	18:20	19:55	56 19:23 (T68)
19	07:36		07:03	06:17	06:25	05:46
	17:07		17:47	18:21	19:56	56 19:24 (T68)
20	07:35		07:01	06:15	06:23	05:45
	17:09		17:49	18:22	19:57	56 19:25 (T68)
21	07:35		07:00	06:14	06:22	05:44
	17:10		17:50	18:23	19:58	56 19:26 (T68)
22	07:34		06:58	06:12	06:20	05:43
	17:11		17:51	18:25	20:00	56 19:27 (T68)
23	07:33		06:57	06:10	06:18	05:43
	17:12		17:52	18:26	20:00	55 19:28 (T68)
24	07:33		06:55	06:08	06:17	05:42
	17:14		17:54	18:27	20:01	55 19:29 (T68)
25	07:32		06:54	06:07	06:15	05:41
	17:15		17:55	18:28	20:02	54 19:30 (T68)
26	07:31		06:52	06:05	06:14	05:40
	17:16		17:56	18:29	20:03	54 19:31 (T68)
27	07:30		06:51	06:03	06:13	05:40
	17:17		17:57	18:30	20:04	53 19:32 (T68)
28	07:29		06:49	06:02	06:11	05:39
	17:19		17:59	18:31	20:05	7 19:16 (T68)
29	07:28			06:10	06:18	05:38
	17:20			18:33	20:06	16 19:17 (T68)
30	07:27			06:08	06:16	05:38
	17:21			18:34	20:07	21 19:18 (T68)
31	07:26			06:56		05:37
	17:23			19:35		49 19:19 (T68)
Potential sun hours	294	295	370	401	452	457
Total, worst case	410			44	1539	898
Sun reduction	0.39			0.51	0.55	0.59
Oper. time red.	1.00			1.00	1.00	1.00
Wind dir. red.	0.69			0.65	0.65	0.65
Total reduction	0.27			0.33	0.36	0.39
Total, real	111			15	552	346

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

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

Baron_SFA

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10/11/2017 10:32 AM / 35

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 604 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (493)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December	
1 05:37	19:13 (T68) 06:02	19:08 (T68) 06:35	07:07	06:43	07:20	
20:52	27 19:47 (T76) 20:32	54 20:02 (T76) 19:46	18:54	17:05	16:39 24 15:46 (T69)	
2 05:38	19:13 (T68) 06:03	19:08 (T68) 06:36	07:08	06:45	07:21 15:22 (T69)	
20:52	33 19:50 (T76) 20:31	53 20:01 (T76) 19:44	18:52	17:04	16:39 25 15:47 (T69)	
3 05:38	19:12 (T68) 06:04	19:08 (T68) 06:37	07:09	06:46	07:22 15:22 (T69)	
20:52	36 19:51 (T76) 20:30	52 20:00 (T76) 19:43	18:50	17:02	16:39 25 15:47 (T69)	
4 05:39	19:12 (T68) 06:05	19:09 (T68) 06:38	07:10	06:47	07:23 15:22 (T69)	
20:51	40 19:53 (T76) 20:29	50 19:59 (T76) 19:41	18:48	17:01	16:38 26 15:48 (T69)	
5 05:39	19:12 (T68) 06:06	19:09 (T68) 06:39	07:11	06:48	07:24 15:22 (T69)	
20:51	41 19:53 (T76) 20:28	49 19:58 (T76) 19:39	18:47	17:00	16:38 27 15:49 (T69)	
6 05:40	19:12 (T68) 06:07	19:10 (T68) 06:40	07:13	06:50	07:25 15:22 (T69)	
20:51	43 19:55 (T76) 20:27	46 19:56 (T76) 19:38	18:45	16:59	16:38 27 15:49 (T69)	
7 05:41	19:12 (T68) 06:09	19:10 (T68) 06:41	07:14	06:51	07:26 15:22 (T69)	
20:51	44 19:56 (T76) 20:25	41 19:52 (T76) 19:36	18:43	16:58	16:38 28 15:50 (T69)	
8 05:41	19:11 (T68) 06:10	19:11 (T68) 06:42	07:15	06:52	07:27 15:22 (T69)	
20:50	45 19:56 (T76) 20:24	34 19:45 (T68) 19:34	18:42	16:56	16:38 29 15:51 (T69)	
9 05:42	19:11 (T68) 06:11	19:12 (T68) 06:44	07:16	06:53	07:28 15:23 (T69)	
20:50	46 19:57 (T76) 20:23	32 19:44 (T68) 19:32	18:40	16:55	16:38 28 15:51 (T69)	
10 05:43	19:11 (T68) 06:12	19:13 (T68) 06:45	07:17	06:55	07:29 15:23 (T69)	
20:50	47 19:58 (T76) 20:21	30 19:43 (T68) 19:31	18:38	16:54	16:38 29 15:52 (T69)	
11 05:43	19:10 (T68) 06:13	19:14 (T68) 06:46	07:18	06:56	07:29 15:24 (T69)	
20:49	48 19:58 (T76) 20:20	27 19:41 (T68) 19:29	18:36	16:53	16:38 29 15:53 (T69)	
12 05:44	19:10 (T68) 06:14	19:15 (T68) 06:47	07:19	06:57	07:30 15:24 (T69)	
20:49	49 19:59 (T76) 20:19	25 19:40 (T68) 19:27	18:35	16:52	16:38 29 15:53 (T69)	
13 05:45	19:10 (T68) 06:15	19:17 (T68) 06:48	07:21	06:58	07:31 15:24 (T69)	
20:48	50 20:00 (T76) 20:17	20 19:37 (T68) 19:25	18:33	16:51	16:38 29 15:53 (T69)	
14 05:46	19:10 (T68) 06:16	19:20 (T68) 06:49	07:22	07:00	07:32 15:24 (T69)	
20:48	51 20:01 (T76) 20:16	14 19:34 (T68) 19:24	18:32	16:50	16:38 30 15:54 (T69)	
15 05:46	19:09 (T68) 06:17	06:50	07:23	07:01	07:33 15:25 (T69)	
20:47	52 20:01 (T76) 20:14	19:22	18:30	16:49	16:39 29 15:54 (T69)	
16 05:47	19:09 (T68) 06:18	06:51	07:24	07:02	07:33 15:26 (T69)	
20:46	52 20:01 (T76) 20:13	19:20	18:28	16:48	16:39 29 15:55 (T69)	
17 05:48	19:09 (T68) 06:19	06:52	07:25	07:03	07:34 15:25 (T69)	
20:46	53 20:02 (T76) 20:12	19:18	18:27	16:48	16:39 30 15:55 (T69)	
18 05:49	19:09 (T68) 06:20	06:53	07:26	07:05	07:35 15:26 (T69)	
20:45	54 20:03 (T76) 20:10	19:16	18:25	16:47	16:39 30 15:56 (T69)	
19 05:50	19:09 (T68) 06:21	06:54	07:28	07:06	07:35 15:26 (T69)	
20:44	54 20:03 (T76) 20:09	19:15	18:24	16:46	16:40 30 15:56 (T69)	
20 05:51	19:09 (T68) 06:22	06:55	07:29	07:07	07:36 15:27 (T69)	
20:44	55 20:04 (T76) 20:07	19:13	18:22	16:45	16:40 30 15:57 (T69)	
21 05:52	19:07 (T68) 06:23	06:56	07:30	07:08	07:37 15:28 (T69)	
20:43	56 20:03 (T76) 20:06	19:11	18:21	16:44	16:41 30 15:58 (T69)	
22 05:53	19:07 (T68) 06:24	06:57	07:31	07:09	07:37 15:28 (T69)	
20:42	56 20:03 (T76) 20:04	19:09	18:19	16:44	16:41 30 15:58 (T69)	
23 05:53	19:07 (T68) 06:25	06:58	07:32	07:11	07:38 15:28 (T69)	
20:41	57 20:04 (T76) 20:02	19:08	18:18	16:43	16:42 30 15:58 (T69)	
24 05:54	19:07 (T68) 06:27	06:59	07:33	07:12	07:38 15:29 (T69)	
20:40	57 20:04 (T76) 20:01	19:06	18:16	16:43	7 15:29 (T69) 16:42 30 15:59 (T69)	
25 05:55	19:07 (T68) 06:28	07:01	07:35	07:13	15:26 (T69) 07:38 15:29 (T69)	
20:39	57 20:04 (T76) 19:58	19:04	18:15	16:42	12 15:38 (T69) 16:43 30 15:59 (T69)	
26 05:56	19:07 (T68) 06:29	07:02	07:36	07:14	15:25 (T69) 07:39 15:29 (T69)	
20:39	57 20:04 (T76) 19:56	19:02	18:13	16:41	15 15:40 (T69) 16:43 30 15:59 (T69)	
27 05:57	19:07 (T68) 06:30	07:03	07:37	07:15	15:24 (T69) 07:39 15:31 (T69)	
20:38	57 20:04 (T76) 19:54	19:01	18:12	16:41	17 15:41 (T69) 16:44 29 16:00 (T69)	
28 05:58	19:07 (T68) 06:31	07:04	07:38	07:16	15:23 (T69) 07:39 15:31 (T69)	
20:37	57 20:04 (T76) 19:53	18:59	18:10	16:40	19 15:42 (T69) 16:45 29 16:00 (T69)	
29 05:59	19:07 (T68) 06:32	07:05	07:40	07:18	15:23 (T69) 07:40 15:31 (T69)	
20:36	56 20:03 (T76) 19:51	18:57	18:09	16:40	21 15:44 (T69) 16:46 30 16:01 (T69)	
30 06:00	19:08 (T68) 06:33	07:06	07:41	07:19	15:23 (T69) 07:40 15:32 (T69)	
20:35	55 20:03 (T76) 19:49	18:55	18:08	16:40	22 15:45 (T69) 16:46 29 16:01 (T69)	
31 06:01	19:08 (T68) 06:34	07:42			07:40 15:32 (T69)	
20:33	55 20:03 (T76) 19:48	18:06			16:47 29 16:01 (T69)	
Potential sun hours	464	431	375	343	294	283
Total, worst case	1540	527		113		889
Sun reduction	0.64	0.91		0.29		0.28
Oper. time red.	1.00	1.00		1.00		1.00
Wind dir. red.	0.65	0.65		0.69		0.69
Total reduction	0.42	0.59		0.20		0.19
Total, real	643	313		23		172

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

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

Printed/Page
10/11/2017 10:32 AM / 36

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 648 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (504)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1 07:40	07:25	07:55 (T53) 06:48	07:33 (T55) 06:55	18:18 (T81) 06:07	18:12 (T81) 05:37	
16:48	17:24	11 08:06 (T53) 18:00	68 16:43 (T86) 19:36	29 18:47 (T81) 20:09	30 18:42 (T81) 20:40	
2 07:41	07:24	07:54 (T53) 06:46	07:35 (T55) 06:53	18:16 (T81) 06:06	18:14 (T81) 05:36	
16:49	17:25	28 16:28 (T86) 18:01	64 16:43 (T86) 19:37	33 18:49 (T81) 20:10	26 18:40 (T81) 20:41	
3 07:41	07:23	07:53 (T53) 06:44	07:35 (T55) 06:51	18:13 (T81) 06:04	18:16 (T81) 05:36	
16:50	17:26	38 16:32 (T86) 18:02	59 16:41 (T86) 19:38	37 18:50 (T81) 20:11	21 18:37 (T81) 20:42	
4 07:41	07:22	07:52 (T53) 06:43	07:36 (T55) 06:49	18:12 (T81) 06:03	18:19 (T81) 05:35	
16:51	17:28	45 16:35 (T86) 18:03	53 16:39 (T86) 19:39	40 18:52 (T81) 20:12	15 18:34 (T81) 20:42	
5 07:41	07:21	07:51 (T53) 06:41	07:39 (T55) 06:48	18:11 (T81) 06:02	18:25 (T81) 05:35	
16:52	17:29	51 16:37 (T86) 18:05	45 16:38 (T86) 19:40	42 18:53 (T81) 20:13	4 18:29 (T81) 20:43	
6 07:41	07:20	07:51 (T53) 06:39	07:43 (T55) 06:46	18:09 (T81) 06:00	05:35	
16:53	17:30	55 16:39 (T86) 18:06	32 16:35 (T86) 19:42	44 18:53 (T81) 20:14	20:44	
7 07:40	07:19	07:50 (T53) 06:38	16:10 (T86) 06:44	18:08 (T81) 05:59	05:34	
16:54	17:32	59 16:40 (T86) 18:07	22 16:32 (T86) 19:43	46 18:54 (T81) 20:15	20:45	
8 07:40	07:18	07:50 (T53) 07:36	17:14 (T86) 06:43	18:07 (T81) 05:58	05:34	
16:55	17:33	62 16:41 (T86) 19:08	15 17:29 (T86) 19:44	48 18:55 (T81) 20:16	20:45	
9 07:40	07:16	07:50 (T53) 07:34	06:41	18:06 (T81) 05:57	05:34	
16:56	17:34	65 16:43 (T86) 19:09	19:45	49 18:55 (T81) 20:18	20:46	
10 07:40	07:15	07:50 (T53) 07:33	06:39	18:06 (T81) 05:55	05:34	
16:57	17:36	66 16:44 (T86) 19:11	19:46	49 18:55 (T81) 20:19	20:46	
11 07:40	07:14	07:50 (T53) 07:31	06:38	18:05 (T81) 05:54	05:33	
16:58	17:37	68 16:44 (T86) 19:12	19:47	50 18:55 (T81) 20:20	20:47	
12 07:39	07:13	07:51 (T53) 07:29	06:36	18:04 (T81) 05:53	05:33	
16:59	17:38	68 16:45 (T86) 19:13	19:48	51 18:55 (T81) 20:21	20:48	
13 07:39	07:11	07:52 (T53) 07:28	06:34	18:04 (T81) 05:52	05:33	
17:00	17:40	68 16:46 (T86) 19:14	19:50	52 18:56 (T81) 20:22	20:48	
14 07:39	07:10	07:52 (T53) 07:26	06:33	18:03 (T81) 05:51	05:33	
17:01	17:41	68 16:46 (T86) 19:15	19:51	52 18:55 (T81) 20:23	20:49	
15 07:38	07:09	07:53 (T53) 07:24	06:31	18:03 (T81) 05:50	05:33	
17:03	17:42	67 16:47 (T86) 19:17	19:52	52 18:55 (T81) 20:24	20:49	
16 07:38	07:07	07:42 (T55) 07:22	06:29	18:03 (T81) 05:49	05:33	
17:04	17:43	76 16:47 (T86) 19:18	19:53	52 18:55 (T81) 20:25	20:49	
17 07:37	07:06	07:40 (T55) 07:21	06:28	18:03 (T81) 05:48	05:33	
17:05	17:45	79 16:48 (T86) 19:19	19:54	51 18:54 (T81) 20:26	20:50	
18 07:37	07:04	07:37 (T55) 07:19	06:26	18:03 (T81) 05:47	05:33	
17:06	17:46	73 16:47 (T86) 19:20	19:55	51 18:54 (T81) 20:27	20:50	
19 07:36	07:03	07:36 (T55) 07:17	06:25	18:03 (T81) 05:46	05:33	
17:07	17:47	74 16:48 (T86) 19:21	19:56	50 18:53 (T81) 20:28	20:51	
20 07:35	07:01	07:35 (T55) 07:15	06:23	18:04 (T81) 05:45	05:33	
17:09	17:49	76 16:48 (T86) 19:22	19:57	49 18:53 (T81) 20:29	20:51	
21 07:35	07:00	07:34 (T55) 07:14	06:22	18:03 (T81) 05:44	05:34	
17:10	17:50	77 16:48 (T86) 19:23	19:59	49 18:52 (T81) 20:30	20:51	
22 07:34	06:58	07:33 (T55) 07:12	06:20	18:04 (T81) 05:43	05:34	
17:11	17:51	77 16:47 (T86) 19:25	20:00	48 18:52 (T81) 20:31	20:51	
23 07:33	06:57	07:33 (T55) 07:10	06:18	18:04 (T81) 05:43	05:34	
17:12	17:52	79 16:48 (T86) 19:26	20:00	47 18:51 (T81) 20:32	20:52	
24 07:33	06:55	07:33 (T55) 07:09	06:17	18:05 (T81) 05:42	05:34	
17:14	17:54	78 16:47 (T86) 19:27	20:01	46 18:51 (T81) 20:33	20:52	
25 07:32	06:54	07:33 (T55) 07:07	06:15	18:05 (T81) 05:41	05:35	
17:15	17:55	77 16:47 (T86) 19:28	20:02	44 18:49 (T81) 20:34	20:52	
26 07:31	06:52	07:32 (T55) 07:05	06:14	18:07 (T81) 05:40	05:35	
17:16	17:56	77 16:46 (T86) 19:29	20:03	42 18:49 (T81) 20:35	20:52	
27 07:30	06:51	07:33 (T55) 07:03	06:13	18:07 (T81) 05:40	05:35	
17:17	17:57	75 16:46 (T86) 19:30	20:04	40 18:47 (T81) 20:36	20:52	
28 07:29	06:49	07:33 (T55) 07:02	06:11	18:08 (T81) 05:39	05:36	
17:19	17:59	71 16:44 (T86) 19:31	20:05	38 18:46 (T81) 20:37	20:52	
29 07:28		07:00	06:10	18:10 (T81) 05:38	05:36	
17:20		19:33	20:06	35 18:45 (T81) 20:38	20:52	
30 07:27		06:58	18:25 (T81) 06:08	18:10 (T81) 05:38	05:37	
17:21		19:34	16 18:41 (T81) 20:08	33 18:43 (T81) 20:38	20:52	
31 07:26	08:00 (T53)	06:56	18:22 (T81)	05:37		
17:23	1 08:01 (T53)	19:35	23 18:45 (T81)	20:39		
Potential sun hours	294	295	370	401	452	457
Total, worst case	1	1808	397	1349	96	
Sun reduction	0.39	0.42	0.44	0.51	0.55	
Oper. time red.	1.00	1.00	1.00	1.00	1.00	
Wind dir. red.	0.63	0.67	0.68	0.67	0.67	
Total reduction	0.25	0.28	0.30	0.34	0.37	
Total, real	0	512	119	463	36	

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

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

Project:

Baron_SFA

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10/11/2017 10:32 AM / 37

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 648 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (504)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December		
1	05:37 06:02		06:35	18:04 (T81) 07:07	06:43	07:19 (T53) 07:20		
	20:52 20:33		19:46	18:54 (T81) 18:54	17:05	16:13 (T86) 16:39		
2	05:38 06:03		06:36	18:04 (T81) 07:08	06:45	07:20 (T53) 07:21		
	20:52 20:31		19:44	18:53 (T81) 18:52	17:04	16:12 (T86) 16:39		
3	05:38 06:04		06:37	18:04 (T81) 07:09	06:46	07:20 (T53) 07:22		
	20:52 20:30		19:43	18:53 (T81) 18:50	17:02	16:11 (T86) 16:39		
4	05:39 06:05		06:38	18:04 (T81) 07:10	06:47	07:20 (T53) 07:23		
	20:52 20:29		19:41	18:52 (T81) 18:48	17:01	16:09 (T86) 16:38		
5	05:39 06:06		06:39	18:04 (T81) 07:12	16:53 (T86) 06:48	07:21 (T53) 07:24		
	20:51 20:28		19:39	18:50 (T81) 18:47	17:03 (T86) 17:00	16:08 (T86) 16:38		
6	05:40 06:07		06:40	18:05 (T81) 07:13	16:48 (T86) 06:50	07:21 (T53) 07:25		
	20:51 20:27		19:38	18:49 (T81) 18:45	17:08 (T86) 16:59	16:07 (T86) 16:38		
7	05:40 06:08		06:41	18:06 (T81) 07:14	16:44 (T86) 06:51	07:22 (T53) 07:26		
	20:51 20:25		19:36	18:48 (T81) 18:43	17:10 (T86) 16:58	16:04 (T86) 16:38		
8	05:41 06:10		18:32 (T81) 06:42	18:06 (T81) 07:15	08:15 (T55) 06:52	07:24 (T53) 07:27		
	20:50 20:24	9	18:41 (T81) 19:34	18:46 (T81) 18:42	17:12 (T86) 16:56	16:03 (T86) 16:38		
9	05:42 06:11		18:27 (T81) 06:44	18:07 (T81) 07:16	08:12 (T55) 06:53	07:25 (T53) 07:28		
	20:50 20:23	18	18:45 (T81) 19:32	18:44 (T81) 18:40	17:13 (T86) 16:55	15:59 (T86) 16:38		
10	05:43 06:12		18:25 (T81) 06:45	18:09 (T81) 07:17	08:11 (T55) 06:55	07:27 (T53) 07:29		
	20:50 20:21	22	18:47 (T81) 19:31	18:42 (T81) 18:38	17:15 (T86) 16:54	10 07:37 (T53) 16:38		
11	05:43 06:13		18:22 (T81) 06:46	18:10 (T81) 07:18	08:09 (T55) 06:56		07:30	
	20:49 20:20	27	18:49 (T81) 19:29	18:40 (T81) 18:37	17:16 (T86) 16:53		16:38	
12	05:44 06:14		18:20 (T81) 06:47	18:12 (T81) 07:19	08:07 (T55) 06:57		07:30	
	20:49 20:19	31	18:51 (T81) 19:27	18:37 (T81) 18:35	17:16 (T86) 16:52		16:38	
13	05:45 06:15		18:19 (T81) 06:48	18:15 (T81) 07:21	08:06 (T55) 06:58		07:31	
	20:48 20:17	33	18:52 (T81) 19:25	18 18:33 (T81) 18:33	17:17 (T86) 16:51		16:38	
14	05:46 06:16		18:17 (T81) 06:49		07:22	08:05 (T55) 07:00		07:32
	20:48 20:16	36	18:53 (T81) 19:24		18:32	17:17 (T86) 16:50		16:38
15	05:46 06:17		18:16 (T81) 06:50		07:23	08:06 (T55) 07:01		07:33
	20:47 20:15	38	18:54 (T81) 19:22		18:30	17:18 (T86) 16:49		16:39
16	05:47 06:18		18:14 (T81) 06:51		07:24	08:05 (T55) 07:02		07:34
	20:47 20:13	41	18:55 (T81) 19:20		18:28	17:18 (T86) 16:48		16:39
17	05:48 06:19		18:13 (T81) 06:52		07:25	08:04 (T55) 07:03		07:34
	20:46 20:12	42	18:55 (T81) 19:18		18:27	17:18 (T86) 16:48		16:39
18	05:49 06:20		18:12 (T81) 06:53		07:26	08:04 (T55) 07:05		07:35
	20:45 20:10	44	18:56 (T81) 19:17		18:25	17:18 (T86) 16:47		16:39
19	05:50 06:21		18:11 (T81) 06:54		07:28	08:04 (T55) 07:06		07:36
	20:45 20:09	45	18:56 (T81) 19:15		18:24	17:18 (T86) 16:46		16:40
20	05:51 06:22		18:10 (T81) 06:55		07:29	08:05 (T55) 07:07		07:36
	20:44 20:07	47	18:57 (T81) 19:13		18:22	17:19 (T86) 16:45		16:40
21	05:52 06:23		18:09 (T81) 06:56		07:30	08:05 (T55) 07:08		07:37
	20:43 20:06	48	18:57 (T81) 19:11		18:21	17:19 (T86) 16:44		16:41
22	05:53 06:24		18:08 (T81) 06:57		07:31	08:06 (T55) 07:10		07:37
	20:42 20:04	49	18:57 (T81) 19:09		18:19	17:18 (T86) 16:44		16:41
23	05:53 06:25		18:07 (T81) 06:58		07:32	08:07 (T55) 07:11		07:38
	20:41 20:03	50	18:57 (T81) 19:08		18:18	17:19 (T86) 16:43		16:42
24	05:54 06:27		18:07 (T81) 06:59		07:34	08:08 (T55) 07:12		07:38
	20:41 20:01	50	18:57 (T81) 19:06		18:16	17:18 (T86) 16:42		16:42
25	05:55 06:28		18:06 (T81) 07:01		07:35	08:10 (T55) 07:13		07:39
	20:40 19:58	51	18:57 (T81) 19:04		18:15	17:17 (T86) 16:42		16:43
26	05:56 06:29		18:06 (T81) 07:02		07:36	08:12 (T55) 07:14		07:39
	20:39 19:56	51	18:57 (T81) 19:02		18:13	17:17 (T86) 16:41		16:43
27	05:57 06:30		18:05 (T81) 07:03		07:37	08:22 (T53) 07:15		07:39
	20:38 19:54	52	18:57 (T81) 19:01		18:12	17:17 (T86) 16:41		16:44
28	05:58 06:31		18:05 (T81) 07:04		07:38	08:21 (T53) 07:17		07:40
	20:37 19:53	51	18:56 (T81) 18:59		18:10	17:16 (T86) 16:40		16:45
29	05:59 06:32		18:04 (T81) 07:05		07:40	08:20 (T53) 07:18		07:40
	20:36 19:51	52	18:56 (T81) 18:57		18:09	17:15 (T86) 16:40		16:46
30	06:00 06:33		18:04 (T81) 07:06		07:41	08:20 (T53) 07:19		07:40
	20:35 19:50	52	18:56 (T81) 18:55		18:08	17:15 (T86) 16:40		16:46
31	06:01 06:34		18:04 (T81)		07:42	08:20 (T53)		07:40
	20:34 19:48	51	18:55 (T81)		18:06	17:14 (T86)		16:47
Potential sun hours	464	431	375	343	294	283		
Total, worst case		990	511	1728	475			
Sun reduction		0.91	0.53	0.45	0.29			
Oper. time red.		1.00	1.00	1.00	1.00			
Wind dir. red.		0.67	0.67	0.68	0.67			
Total reduction		0.61	0.36	0.30	0.19			
Total, real		606	182	526	92			

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

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

Project:

Baron_SFA

Printed/Page

10/11/2017 10:32 AM / 38

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 650 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (506)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
120 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	07:25	06:48	07:27 (T55)	06:55	06:07
	16:48	17:24	18:00	17:15 (T86)	19:36	20:09
2	07:41	07:24	06:46	07:26 (T55)	06:53	06:06
	16:49	17:25	18:01	17:17 (T86)	19:37	20:10
3	07:41	07:23	06:44	07:25 (T55)	06:51	06:04
	16:50	17:26	18:02	17:18 (T86)	19:38	20:11
4	07:41	07:22	06:43	07:24 (T55)	06:49	06:03
	16:51	17:28	18:03	17:19 (T86)	19:39	20:12
5	07:41	07:21	06:41	07:25 (T55)	06:48	06:02
	16:52	17:29	18:05	17:20 (T86)	19:40	20:13
6	07:40	07:20	07:56 (T53)	06:39	07:24 (T55)	06:46
	16:53	17:30	8 08:04 (T53)	18:06	73 17:21 (T86)	19:42
7	07:40	07:19	07:52 (T53)	06:38	07:24 (T55)	06:44
	16:54	17:32	14 08:06 (T53)	18:07	74 17:21 (T86)	19:43
8	07:40	07:18	07:51 (T53)	07:36	08:24 (T55)	06:43
	16:55	17:33	17 08:08 (T53)	19:08	75 18:22 (T86)	19:44
9	07:40	07:16	07:50 (T53)	07:34	08:24 (T55)	06:41
	16:56	17:34	20 08:10 (T53)	19:09	75 18:22 (T86)	19:45
10	07:40	07:15	07:49 (T53)	07:33	08:25 (T55)	06:39
	16:57	17:36	22 08:11 (T53)	19:11	73 18:22 (T86)	19:46
11	07:40	07:14	07:48 (T53)	07:31	08:26 (T55)	06:38
	16:58	17:37	23 08:11 (T53)	19:12	72 18:22 (T86)	19:47
12	07:39	07:13	07:47 (T53)	07:29	08:26 (T55)	06:36
	16:59	17:38	25 08:12 (T53)	19:13	70 18:22 (T86)	19:48
13	07:39	07:11	07:47 (T53)	07:28	08:27 (T55)	06:34
	17:00	17:40	26 08:13 (T53)	19:14	67 18:21 (T86)	19:50
14	07:39	07:10	07:46 (T53)	07:26	08:29 (T55)	06:33
	17:01	17:41	27 08:13 (T53)	19:15	63 18:21 (T86)	19:51
15	07:38	07:09	07:47 (T53)	07:24	08:32 (T55)	06:31
	17:03	17:42	26 08:13 (T53)	19:17	56 18:21 (T86)	19:52
16	07:38	07:07	07:46 (T53)	07:22	17:37 (T86)	06:29
	17:04	17:43	27 08:13 (T53)	19:18	43 18:20 (T86)	19:53
17	07:37	07:06	07:47 (T53)	07:21	17:37 (T86)	06:28
	17:05	17:45	26 08:13 (T53)	19:19	42 18:19 (T86)	19:54
18	07:37	07:04	07:46 (T53)	07:19	17:37 (T86)	06:26
	17:06	17:46	26 08:12 (T53)	19:20	41 18:18 (T86)	19:55
19	07:36	07:03	07:47 (T53)	07:17	17:38 (T86)	06:25
	17:07	17:47	25 08:12 (T53)	19:21	40 18:18 (T86)	19:56
20	07:35	07:01	07:47 (T53)	07:15	17:38 (T86)	06:23
	17:09	17:49	23 08:10 (T53)	19:22	38 18:16 (T86)	19:57
21	07:35	07:00	07:49 (T53)	07:14	17:39 (T86)	06:22
	17:10	17:50	21 08:10 (T53)	19:23	36 18:15 (T86)	19:59
22	07:34	06:58	07:49 (T53)	07:12	17:40 (T86)	06:20
	17:11	17:51	19 08:08 (T53)	19:25	33 18:13 (T86)	20:00
23	07:33	06:57	07:41 (T55)	07:10	17:42 (T86)	06:18
	17:12	17:52	18 08:07 (T53)	19:26	30 18:12 (T86)	20:00
24	07:33	06:55	07:35 (T55)	07:08	17:43 (T86)	06:17
	17:14	17:54	23 08:03 (T53)	19:27	27 18:10 (T86)	20:01
25	07:32	06:54	07:33 (T55)	07:07	17:45 (T86)	06:15
	17:15	17:55	19 07:52 (T55)	19:28	22 18:07 (T86)	20:02
26	07:31	06:52	07:31 (T55)	07:05	17:48 (T86)	06:14
	17:16	17:56	27 17:04 (T86)	19:29	15 18:03 (T86)	20:03
27	07:30	06:51	07:30 (T55)	07:03	06:13	18:33 (T81)
	17:17	17:57	41 17:10 (T86)	19:30	20:04	19:17 (T81)
28	07:29	06:49	07:28 (T55)	07:02	06:11	18:33 (T81)
	17:19	17:59	50 17:13 (T86)	19:31	20:05	19:17 (T81)
29	07:28		07:00		06:10	18:33 (T81)
	17:20		19:33		20:06	19:17 (T81)
30	07:27		06:58		06:08	18:33 (T81)
	17:21		19:34		20:08	19:16 (T81)
31	07:26		06:56		05:37	
	17:23		19:35		20:39	
Potential sun hours	294	295	370	401	452	457
Total, worst case		553	1390	616	592	
Sun reduction		0.42	0.44	0.51	0.55	
Oper. time red.		1.00	1.00	1.00	1.00	
Wind dir. red.		0.64	0.67	0.65	0.65	
Total reduction		0.27	0.30	0.33	0.36	
Total, real		149	412	206	213	

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

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

Baron_SFA

Printed/Page

10/11/2017 10:32 AM / 39

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 650 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (506)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37 20:52	06:02 20:33	18:49 (T81) 06:35 19:21 (T81) 19:46	07:07 18:54	08:06 (T55) 06:43 18:00 (T86) 17:05	07:18 (T53) 07:20 07:40 (T53) 16:39
2	05:38 20:52	06:03 20:31	18:48 (T81) 06:36 19:22 (T81) 19:44	07:08 18:52	08:04 (T55) 06:45 18:00 (T86) 17:04	07:20 (T53) 07:21 07:39 (T53) 16:39
3	05:38 20:52	06:04 20:30	18:47 (T81) 06:37 19:22 (T81) 19:43	07:09 18:50	08:03 (T55) 06:46 18:00 (T86) 17:02	07:21 (T53) 07:22 07:38 (T53) 16:39
4	05:39 20:52	06:05 20:29	18:46 (T81) 06:38 19:23 (T81) 19:41	07:10 18:48	08:02 (T55) 06:47 18:00 (T86) 17:01	07:22 (T53) 07:23 07:36 (T53) 16:38
5	05:39 20:51	06:06 20:28	18:45 (T81) 06:39 19:24 (T81) 19:39	07:12 18:47	08:01 (T55) 06:48 17:59 (T86) 17:00	07:26 (T53) 07:24 07:33 (T53) 16:38
6	05:40 20:51	06:07 20:27	18:45 (T81) 06:40 19:24 (T81) 19:38	07:13 18:45	08:01 (T55) 06:50 17:58 (T86) 16:59	07:25 (T53) 07:25 16:38
7	05:40 20:51	06:08 20:25	18:44 (T81) 06:41 19:24 (T81) 19:36	07:14 18:43	08:00 (T55) 06:51 17:57 (T86) 16:58	07:26 (T53) 16:38 16:38
8	05:41 20:50	06:10 20:24	18:43 (T81) 06:42 19:25 (T81) 19:34	07:15 18:42	07:59 (T55) 06:52 17:55 (T86) 16:56	07:27 (T53) 16:38 16:38
9	05:42 20:50	06:11 20:23	18:43 (T81) 06:44 19:25 (T81) 19:32	07:16 18:40	07:59 (T55) 06:53 17:54 (T86) 16:55	07:28 (T53) 16:38 16:38
10	05:43 20:50	06:12 20:21	18:42 (T81) 06:45 19:25 (T81) 19:31	07:17 18:38	08:00 (T55) 06:55 17:53 (T86) 16:54	07:29 (T53) 16:38 16:38
11	05:43 20:49	06:13 20:20	18:42 (T81) 06:46 19:25 (T81) 19:29	07:18 18:36	08:00 (T55) 06:56 17:52 (T86) 16:53	07:30 (T53) 16:38 16:38
12	05:44 20:49	06:14 20:19	18:42 (T81) 06:47 19:25 (T81) 19:27	07:19 18:35	08:00 (T55) 06:57 17:50 (T86) 16:52	07:30 (T53) 16:38 16:38
13	05:45 20:48	06:15 20:17	18:41 (T81) 06:48 19:25 (T81) 19:25	07:21 18:33	08:00 (T55) 06:58 17:47 (T86) 16:51	07:31 (T53) 16:38 16:38
14	05:46 20:48	06:16 20:16	18:41 (T81) 06:49 19:25 (T81) 19:24	07:22 18:32	08:01 (T55) 07:00 17:44 (T86) 16:50	07:32 (T53) 16:38 16:38
15	05:46 20:47	06:17 20:15	18:41 (T81) 06:50 19:25 (T81) 19:22	07:23 18:30	08:03 (T55) 07:01 17:41 (T86) 16:49	07:33 (T53) 16:39 16:39
16	05:47 20:47	06:18 20:13	18:41 (T81) 06:51 19:24 (T81) 19:20	07:24 18:28	08:04 (T55) 07:02 08:25 (T55) 16:48	07:34 (T53) 16:39 16:39
17	05:48 20:46	06:19 20:12	18:41 (T81) 06:52 19:24 (T81) 19:18	17:38 (T86) 07:25 17:50 (T86) 18:27	08:05 (T55) 07:03 08:22 (T55) 16:48	07:34 (T53) 16:39 16:39
18	05:49 20:45	06:20 20:10	18:41 (T81) 06:53 19:23 (T81) 19:17	17:33 (T86) 07:26 17:53 (T86) 18:25	08:08 (T55) 07:05 08:36 (T53) 16:47	07:35 (T53) 16:39 16:39
19	05:50 20:45	06:21 20:09	18:41 (T81) 06:54 19:23 (T81) 19:15	17:30 (T86) 07:28 17:55 (T86) 18:24	08:22 (T53) 07:06 08:38 (T53) 16:46	07:36 (T53) 16:40 16:40
20	05:51 20:44	06:22 20:07	18:41 (T81) 06:55 19:22 (T81) 19:13	17:29 (T86) 07:29 17:58 (T86) 18:22	08:21 (T53) 07:07 08:40 (T53) 16:45	07:37 (T53) 16:40 16:40
21	05:52 20:43	06:23 20:06	18:41 (T81) 06:56 19:21 (T81) 19:11	17:27 (T86) 07:30 17:59 (T86) 18:21	08:19 (T53) 07:08 08:41 (T53) 16:44	07:37 (T53) 16:41 16:41
22	05:52 20:42	06:24 20:04	18:42 (T81) 06:57 19:20 (T81) 19:09	17:25 (T86) 07:31 18:00 (T86) 18:19	08:18 (T53) 07:10 08:41 (T53) 16:44	07:37 (T53) 16:41 16:41
23	05:53 20:41	06:25 20:03	18:42 (T81) 06:58 19:19 (T81) 19:08	17:23 (T86) 07:32 18:00 (T86) 18:18	08:17 (T53) 07:11 08:42 (T53) 16:43	07:38 (T53) 16:42 16:42
24	05:54 20:41	06:27 20:01	18:43 (T81) 06:59 19:17 (T81) 19:06	17:22 (T86) 07:34 18:01 (T86) 18:16	08:17 (T53) 07:12 08:43 (T53) 16:42	07:38 (T53) 16:42 16:42
25	05:55 20:40	19:01 (T81) 06:28 19:08 (T81) 19:58	18:44 (T81) 07:01 19:16 (T81) 19:04	17:20 (T86) 07:35 18:01 (T86) 18:15	08:16 (T53) 07:13 08:43 (T53) 16:42	07:39 (T53) 16:43 16:43
26	05:56 20:39	18:58 (T81) 06:29 19:12 (T81) 19:56	18:45 (T81) 07:02 19:14 (T81) 19:02	17:19 (T86) 07:36 18:01 (T86) 18:13	08:16 (T53) 07:14 08:42 (T53) 16:41	07:39 (T53) 16:43 16:43
27	05:57 20:38	18:56 (T81) 06:30 19:14 (T81) 19:54	18:47 (T81) 07:03 19:12 (T81) 19:01	17:18 (T86) 07:37 18:01 (T86) 18:12	08:16 (T53) 07:15 08:43 (T53) 16:41	07:39 (T53) 16:44 16:44
28	05:58 20:37	18:54 (T81) 06:31 19:16 (T81) 19:53	18:49 (T81) 07:04 19:09 (T81) 18:59	08:14 (T55) 07:38 18:01 (T86) 18:10	08:16 (T53) 07:17 08:42 (T53) 16:40	07:40 (T53) 16:45 16:45
29	05:59 20:36	18:52 (T81) 06:32 19:17 (T81) 19:51	18:52 (T81) 07:05 19:06 (T81) 18:57	08:10 (T55) 07:40 18:01 (T86) 18:09	08:16 (T53) 07:18 08:42 (T53) 16:40	07:40 (T53) 16:46 16:46
30	06:00 20:35	18:51 (T81) 06:33 19:19 (T81) 19:50	07:06 18:55	08:08 (T55) 07:41 18:01 (T86) 18:08	08:17 (T53) 07:19 08:42 (T53) 16:40	07:40 (T53) 16:46 16:46
31	06:01 20:34	18:50 (T81) 06:34 19:20 (T81) 19:48		07:42 18:06	08:17 (T53) 07:19 08:41 (T53) 16:40	07:40 (T53) 16:47 16:47
Potential sun hours	464	431	375	343	294	283
Total, worst case	144	1081	533	1355	79	
Sun reduction	0.64	0.91	0.53	0.45	0.29	
Oper. time red.	1.00	1.00	1.00	1.00	1.00	
Wind dir. red.	0.65	0.65	0.68	0.66	0.63	
Total reduction	0.42	0.60	0.36	0.30	0.18	
Total, real	60	644	192	402	15	

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

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

Project:
Baron_SFA

Printed/Page
10/11/2017 10:32 AM / 42
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 769 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (550)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	07:25	06:47	06:54	06:07	06:27 (T60) 05:36
	16:48	17:24	18:00	19:36	20:09	19:24 (T47) 20:40
2	07:40	07:24	06:46	06:53	06:05	06:26 (T52) 05:36
	16:49	17:25	18:01	19:37	20:10	19:24 (T47) 20:41
3	07:40	07:23	06:44	06:51	06:04	06:24 (T52) 05:36
	16:50	17:26	18:02	19:38	20:11	19:22 (T47) 20:41
4	07:40	07:22	06:43	06:49	06:03	06:23 (T52) 05:35
	16:51	17:28	18:03	19:39	20:12	19:22 (T47) 20:42
5	07:40	07:21	06:41	06:48	06:01	06:22 (T52) 05:35
	16:52	17:29	18:04	19:40	20:13	19:21 (T47) 20:43
6	07:40	07:20	06:39	06:46	06:00	06:21 (T52) 05:34
	16:53	17:30	18:06	19:41	20:14	19:52 (T44) 20:44
7	07:40	07:19	06:38	06:44	05:59	06:19 (T52) 05:34
	16:54	17:32	18:07	19:43	20:15	19:52 (T44) 20:44
8	07:40	07:17	06:36	06:42	19:06 (T47) 05:58	06:18 (T52) 05:34
	16:55	17:33	18:08	19:44	3 19:09 (T47) 20:16	19:53 (T44) 20:45
9	07:40	07:16	06:34	06:41	18:58 (T47) 05:56	06:17 (T52) 05:34
	16:56	17:34	18:09	19:45	17 19:15 (T47) 20:17	19:54 (T44) 20:46
10	07:40	07:15	06:33	06:39	18:54 (T47) 05:55	06:16 (T52) 05:33
	16:57	17:36	18:10	19:46	24 19:18 (T47) 20:19	19:55 (T44) 20:46
11	07:39	07:14	06:31	06:37	18:53 (T47) 05:54	06:15 (T52) 05:33
	16:58	17:37	18:12	19:47	27 19:20 (T47) 20:20	19:56 (T44) 20:47
12	07:39	07:12	06:29	06:36	18:50 (T47) 05:53	06:14 (T52) 05:33
	16:59	17:38	18:13	19:48	31 19:21 (T47) 20:21	19:57 (T44) 20:47
13	07:39	07:11	06:27	06:34	18:49 (T47) 05:52	06:13 (T52) 05:33
	17:00	17:39	18:14	19:49	34 19:23 (T47) 20:22	19:58 (T44) 20:48
14	07:38	07:10	06:26	06:32	18:47 (T47) 05:51	06:12 (T52) 05:33
	17:01	17:41	18:15	19:51	37 19:24 (T47) 20:23	19:59 (T44) 20:48
15	07:38	07:08	06:24	06:31	18:45 (T47) 05:50	06:11 (T52) 05:33
	17:02	17:42	18:16	19:52	39 19:24 (T47) 20:24	20:00 (T44) 20:49
16	07:38	07:07	06:22	06:29	18:45 (T47) 05:49	06:10 (T52) 05:33
	17:04	17:43	18:18	19:53	41 19:26 (T47) 20:25	20:01 (T44) 20:49
17	07:37	07:06	06:21	06:28	18:43 (T47) 05:48	06:09 (T52) 05:33
	17:05	17:45	18:19	19:54	43 19:26 (T47) 20:26	20:02 (T44) 20:50
18	07:36	07:04	06:19	06:26	18:43 (T47) 05:47	06:08 (T52) 05:33
	17:06	17:46	18:20	19:55	44 19:27 (T47) 20:27	20:03 (T44) 20:50
19	07:36	07:03	06:17	06:24	18:42 (T47) 05:46	06:07 (T52) 05:33
	17:07	17:47	18:21	19:56	44 19:26 (T47) 20:28	20:03 (T44) 20:50
20	07:35	07:01	06:15	06:23	18:41 (T47) 05:45	06:06 (T52) 05:33
	17:08	17:48	18:22	19:57	45 19:26 (T47) 20:29	20:03 (T44) 20:51
21	07:35	07:00	06:14	06:21	06:41 (T60) 05:44	06:05 (T52) 05:33
	17:10	17:50	18:23	19:58	47 19:27 (T47) 20:30	20:03 (T44) 20:51
22	07:34	06:58	06:12	06:20	06:39 (T60) 05:43	06:05 (T52) 05:34
	17:11	17:51	18:24	20:00	49 19:26 (T47) 20:31	20:04 (T44) 20:51
23	07:33	06:57	06:10	06:18	06:38 (T60) 05:42	06:04 (T52) 05:34
	17:12	17:52	18:26	20:00	51 19:27 (T47) 20:32	20:04 (T44) 20:51
24	07:32	06:55	06:08	06:17	06:37 (T60) 05:42	06:03 (T52) 05:34
	17:13	17:53	18:27	20:01	52 19:27 (T47) 20:33	20:04 (T44) 20:52
25	07:32	06:54	06:07	06:15	06:35 (T60) 05:41	06:03 (T52) 05:34
	17:15	17:55	18:28	20:02	53 19:26 (T47) 20:34	20:04 (T44) 20:52
26	07:31	06:52	06:05	06:14	06:34 (T60) 05:40	06:02 (T52) 05:35
	17:16	17:56	18:29	20:03	54 19:26 (T47) 20:35	20:04 (T44) 20:52
27	07:30	06:51	06:03	06:12	06:32 (T60) 05:39	06:01 (T52) 05:35
	17:17	17:57	18:30	20:04	54 19:25 (T47) 20:36	20:04 (T44) 20:52
28	07:29	06:49	06:01	06:11	06:31 (T60) 05:39	06:01 (T52) 05:35
	17:18	17:58	18:31	20:05	54 19:25 (T47) 20:37	20:04 (T44) 20:52
29	07:28		06:00	06:09	06:29 (T60) 05:38	06:00 (T52) 05:36
	17:20		19:32	20:06	53 19:24 (T47) 20:37	20:04 (T44) 20:52
30	07:27		06:58	06:08	06:28 (T60) 05:38	06:00 (T52) 05:36
	17:21		19:34	20:07	54 19:24 (T47) 20:38	20:04 (T44) 20:52
31	07:26		06:56		05:37	05:59 (T52)
	17:22		19:35		66 20:39	20:03 (T44)
Potential sun hours	294	295	370	401	452	457
Total, worst case				950	1873	1537
Sun reduction				0.51	0.55	0.59
Oper. time red.				1.00	1.00	1.00
Wind dir. red.				0.66	0.67	0.67
Total reduction				0.33	0.37	0.40
Total, real				318	686	608

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

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

Project:

Baron_SFA

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Licensed user:

EDR
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(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 769 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (550)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum

210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37	06:09 (T52) 06:02	06:25 (T52) 06:35	18:52 (T47) 07:07	06:43	07:20
2	05:52	51 20:06 (T44) 20:32	63 20:08 (T44) 19:46	27 19:19 (T47) 18:53	17:05	16:39
3	05:38	06:09 (T52) 06:04	65 20:07 (T44) 20:31	24 19:17 (T47) 18:52	17:03	16:39
4	05:38	06:09 (T52) 06:04	66 20:06 (T44) 19:43	17 19:13 (T47) 18:50	17:02	16:38
5	05:39	55 20:08 (T44) 20:29	63 20:04 (T44) 19:41	4 19:06 (T47) 18:48	17:01	16:38
6	05:40	57 20:09 (T44) 20:28	61 20:03 (T44) 19:39	18:46	17:00	16:38
7	05:40	59 20:09 (T44) 20:25	50 19:59 (T44) 19:36	18:43	16:57	16:38
8	05:41	61 20:10 (T44) 20:24	47 19:31 (T47) 19:34	18:41	16:56	16:38
9	05:42	62 20:10 (T44) 20:23	46 19:31 (T47) 19:32	18:40	16:55	16:38
10	05:42	64 20:10 (T44) 20:21	49 19:32 (T47) 19:31	18:38	16:54	16:38
11	05:43	65 20:11 (T44) 20:20	51 19:32 (T47) 19:29	18:36	16:53	16:38
12	05:44	67 20:12 (T44) 20:19	54 19:33 (T47) 19:27	18:35	16:52	16:38
13	05:45	66 20:12 (T44) 20:17	54 19:33 (T47) 19:25	18:33	16:51	16:38
14	05:45	67 20:12 (T44) 20:16	54 19:33 (T47) 19:23	18:31	16:50	16:38
15	05:46	66 20:12 (T44) 20:14	54 19:33 (T47) 19:22	18:30	16:49	16:38
16	05:47	67 20:13 (T44) 20:13	54 19:33 (T47) 19:20	18:28	16:48	16:39
17	05:48	66 20:13 (T44) 20:11	53 19:33 (T47) 19:18	18:27	16:47	16:39
18	05:49	67 20:14 (T44) 20:10	53 19:33 (T47) 19:16	18:25	16:47	16:39
19	05:50	66 20:14 (T44) 20:09	52 19:33 (T47) 19:15	18:23	16:46	16:40
20	05:51	66 20:14 (T44) 20:07	50 19:32 (T47) 19:13	18:22	16:45	16:40
21	05:51	65 20:14 (T44) 20:04	46 19:31 (T47) 19:09	18:19	16:44	16:41
22	05:52	64 20:14 (T44) 20:02	45 19:31 (T47) 19:07	18:17	16:43	16:41
23	05:53	63 20:14 (T44) 20:01	44 19:30 (T47) 19:06	18:16	16:42	16:42
24	05:54	62 20:14 (T44) 19:58	43 19:29 (T47) 19:04	18:14	16:42	16:43
25	05:55	61 20:13 (T44) 19:56	42 19:28 (T47) 19:02	18:13	16:41	16:43
26	05:56	60 20:13 (T44) 19:54	40 19:27 (T47) 19:00	18:12	16:41	16:44
27	05:57	59 20:12 (T44) 19:54	39 19:26 (T47) 18:59	18:10	16:40	16:45
28	05:58	58 20:12 (T44) 19:53	37 19:25 (T47) 18:57	18:09	16:40	16:45
29	05:59	57 20:11 (T44) 19:51	37 19:25 (T47) 18:57	18:09	16:40	16:45
30	06:00	56 20:11 (T44) 19:51	37 19:25 (T47) 18:57	18:09	16:40	16:45
31	06:01	55 20:10 (T44) 19:49	34 19:23 (T47) 18:55	18:07	16:39	16:46
	20:33	63 20:09 (T44) 19:48	31 19:21 (T47) 18:53	18:06	16:38	16:47
Potential sun hours	464	431	375	343	294	283
Total, worst case	1903	1546	72			
Sun reduction	0.64	0.91	0.53			
Oper. time red.	1.00	1.00	1.00			
Wind dir. red.	0.67	0.66	0.65			
Total reduction	0.43	0.60	0.35			
Total, real	815	926	25			

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

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

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Licensed user:

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217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 770 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (551)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	07:25	06:47	06:54	06:07	06:27 (T60) 05:36
	16:48	17:24	18:00	19:36	20:09	19:24 (T47) 20:40
2	07:40	07:24	06:46	06:53	06:05	06:26 (T60) 05:36
	16:49	17:25	18:01	19:37	20:10	19:23 (T47) 20:41
3	07:40	07:23	06:44	06:51	06:04	06:24 (T60) 05:36
	16:50	17:26	18:02	19:38	20:11	19:22 (T47) 20:41
4	07:40	07:22	06:43	06:49	06:03	06:23 (T60) 05:35
	16:51	17:28	18:03	19:39	20:12	19:21 (T47) 20:42
5	07:40	07:21	06:41	06:48	06:01	06:22 (T60) 05:35
	16:52	17:29	18:04	19:40	20:13	19:50 (T44) 20:43
6	07:40	07:20	06:39	06:46	06:00	06:21 (T52) 05:34
	16:53	17:30	18:06	19:41	20:14	19:52 (T44) 20:44
7	07:40	07:19	06:38	06:44	05:59	06:19 (T52) 05:34
	16:54	17:32	18:07	19:43	20:15	19:52 (T44) 20:44
8	07:40	07:17	06:36	06:42	05:58	06:18 (T52) 05:34
	16:55	17:33	18:08	19:44	20:16	19:53 (T44) 20:45
9	07:40	07:16	06:34	06:41	19:01 (T47) 05:56	06:17 (T52) 05:34
	16:56	17:34	18:09	19:45	19:16 (T47) 20:17	19:54 (T44) 20:46
10	07:40	07:15	06:33	06:39	18:57 (T47) 05:55	06:16 (T52) 05:33
	16:57	17:36	18:10	19:46	19:19 (T47) 20:19	19:55 (T44) 20:46
11	07:39	07:14	06:31	06:37	18:55 (T47) 05:54	06:15 (T52) 05:33
	16:58	17:37	18:12	19:47	19:21 (T47) 20:20	19:56 (T44) 20:47
12	07:39	07:12	06:29	06:36	18:53 (T47) 05:53	06:14 (T52) 05:33
	16:59	17:38	18:13	19:48	19:22 (T47) 20:21	19:57 (T44) 20:47
13	07:39	07:11	06:27	06:34	18:52 (T47) 05:52	06:13 (T52) 05:33
	17:00	17:39	18:14	19:49	19:24 (T47) 20:22	19:58 (T44) 20:48
14	07:38	07:10	06:26	06:32	18:50 (T47) 05:51	06:12 (T52) 05:33
	17:01	17:41	18:15	19:51	19:25 (T47) 20:23	19:59 (T44) 20:48
15	07:38	07:08	06:24	06:31	18:48 (T47) 05:50	06:11 (T52) 05:33
	17:02	17:42	18:16	19:52	19:25 (T47) 20:24	20:00 (T44) 20:49
16	07:37	07:07	06:22	06:29	18:48 (T47) 05:49	06:10 (T52) 05:33
	17:04	17:43	18:18	19:53	19:26 (T47) 20:25	20:01 (T44) 20:49
17	07:37	07:06	06:21	06:28	18:46 (T47) 05:48	06:09 (T52) 05:33
	17:05	17:45	18:19	19:54	19:26 (T47) 20:26	20:02 (T44) 20:50
18	07:36	07:04	06:19	06:26	18:46 (T47) 05:47	06:08 (T52) 05:33
	17:06	17:46	18:20	19:55	19:27 (T47) 20:27	20:02 (T44) 20:50
19	07:36	07:03	06:17	06:24	18:45 (T47) 05:46	06:07 (T52) 05:33
	17:07	17:47	18:21	19:56	19:27 (T47) 20:28	20:02 (T44) 20:50
20	07:35	07:01	06:15	06:23	18:44 (T47) 05:45	06:06 (T52) 05:33
	17:08	17:48	18:22	19:57	19:27 (T47) 20:29	20:02 (T44) 20:51
21	07:35	07:00	06:14	06:21	18:44 (T47) 05:44	06:05 (T52) 05:33
	17:10	17:50	18:23	19:58	19:27 (T47) 20:30	20:02 (T44) 20:51
22	07:34	06:58	06:12	06:20	18:43 (T47) 05:43	06:05 (T52) 05:34
	17:11	17:51	18:24	20:00	19:27 (T47) 20:31	20:03 (T44) 20:51
23	07:33	06:57	06:10	06:18	18:43 (T60) 05:42	06:04 (T52) 05:34
	17:12	17:52	18:26	20:00	19:27 (T47) 20:32	20:03 (T44) 20:51
24	07:32	06:55	06:08	06:17	18:43 (T60) 05:42	06:03 (T52) 05:34
	17:13	17:53	18:27	20:01	19:28 (T47) 20:33	20:02 (T44) 20:52
25	07:32	06:54	06:07	06:15	18:43 (T60) 05:41	06:03 (T52) 05:34
	17:15	17:55	18:28	20:02	19:27 (T47) 20:34	20:03 (T44) 20:52
26	07:31	06:52	06:05	06:14	18:43 (T60) 05:40	06:02 (T52) 05:35
	17:16	17:56	18:29	20:03	19:27 (T47) 20:35	20:02 (T44) 20:52
27	07:30	06:51	06:03	06:12	18:43 (T60) 05:39	06:01 (T52) 05:35
	17:17	17:57	18:30	20:04	19:26 (T47) 20:36	20:02 (T44) 20:52
28	07:29	06:49	06:01	06:11	18:43 (T60) 05:39	06:01 (T52) 05:35
	17:18	17:58	18:31	20:05	19:26 (T47) 20:37	20:02 (T44) 20:52
29	07:28		06:00	06:09	18:43 (T60) 05:38	06:00 (T52) 05:36
	17:20		19:32	20:06	19:25 (T47) 20:37	20:01 (T44) 20:52
30	07:27		06:58	06:08	18:43 (T60) 05:38	06:00 (T52) 05:36
	17:21		19:34	20:07	19:24 (T47) 20:38	20:02 (T44) 20:52
31	07:26		06:56		05:37	05:59 (T52)
	17:22		19:35		20:39	20:01 (T44)
Potential sun hours	294	295	370	401	452	457
Total, worst case				880	1659	1596
Sun reduction				0.51	0.55	0.59
Oper. time red.				1.00	1.00	1.00
Wind dir. red.				0.65	0.66	0.68
Total reduction				0.33	0.37	0.40
Total, real				294	607	641

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

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

Project: Baron_SFA

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217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated: 10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 770 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (551)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 1 row of values: 0.39, 0.42, 0.44, 0.51, 0.55, 0.59, 0.64, 0.91, 0.53, 0.45, 0.29, 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum

210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760

Idle start wind speed: Cut in wind speed from power curve

Main shadow calculation table with columns for months (July-December) and rows for time intervals (01:00-20:30) and summary rows (Potential sun hours, Total, worst case, etc.)

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

Matrix with 4 columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

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Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 806 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (567)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	14:46 (T91) 07:25	06:48	16:26 (T89) 06:55	06:07	05:37
	16:48 38	15:24 (T91) 17:24	18:00	16:58 (T89) 19:36	20:09	06:35 (T55)
2	07:41	14:47 (T91) 07:24	06:46	16:28 (T89) 06:53	06:06	05:36
	16:49 37	15:24 (T91) 17:25	18:01	16:57 (T89) 19:37	20:10	06:34 (T55)
3	07:41	14:47 (T91) 07:23	06:44	16:29 (T89) 06:51	06:04	05:36
	16:50 38	15:25 (T91) 17:26	18:02	16:55 (T89) 19:38	20:11	06:35 (T55)
4	07:41	14:48 (T91) 07:22	06:43	16:30 (T89) 06:49	07:28 (T53) 06:03	05:35
	16:51 37	15:25 (T91) 17:28	18:03	16:53 (T89) 19:39	8 07:36 (T53) 20:12	06:36 (T55)
5	07:41	14:48 (T91) 07:21	06:41	16:32 (T89) 06:48	07:24 (T53) 06:02	05:35
	16:52 36	15:24 (T91) 17:29	18:05	16:52 (T89) 19:40	15 07:39 (T53) 20:13	06:36 (T55)
6	07:40	14:49 (T91) 07:20	06:39	16:35 (T89) 06:46	07:21 (T53) 06:00	05:35
	16:53 36	15:25 (T91) 17:30	18:06	16:49 (T89) 19:42	19 07:40 (T53) 20:14	06:37 (T55)
7	07:40	14:50 (T91) 07:19	06:38	16:37 (T89) 06:44	07:20 (T53) 05:59	12 06:41 (T55) 05:34
	16:54 35	15:25 (T91) 17:32	18:07	16:43 (T89) 19:43	22 07:42 (T53) 20:15	18 06:59 (T55) 20:44
8	07:40	14:51 (T91) 07:18	06:36	16:38 (T89) 06:43	07:18 (T53) 05:58	06:39 (T55) 05:34
	16:55 34	15:25 (T91) 17:33	19:08	16:44 (T89) 19:44	25 07:43 (T53) 20:16	21 07:00 (T55) 20:45
9	07:40	14:52 (T91) 07:16	06:34	16:39 (T89) 06:41	07:17 (T53) 05:57	06:38 (T55) 05:34
	16:56 34	15:26 (T91) 17:34	19:09	16:45 (T89) 19:45	26 07:43 (T53) 20:18	23 07:01 (T55) 20:46
10	07:40	14:52 (T91) 07:15	06:33	16:40 (T89) 06:39	07:16 (T53) 05:55	06:36 (T55) 05:34
	16:57 33	15:25 (T91) 17:36	19:11	16:46 (T89) 19:46	28 07:44 (T53) 20:19	26 07:02 (T55) 20:46
11	07:40	14:53 (T91) 07:14	16:37 (T89) 07:31	06:38	07:15 (T53) 05:54	06:36 (T55) 05:33
	16:58 32	15:25 (T91) 17:37	12 16:49 (T89) 19:12	19:47	29 07:44 (T53) 20:20	27 07:03 (T55) 20:47
12	07:39	14:55 (T91) 07:13	16:34 (T89) 07:29	06:36	07:14 (T53) 05:53	06:35 (T55) 05:33
	16:59 30	15:25 (T91) 17:38	19 16:53 (T89) 19:13	19:48	29 07:43 (T53) 20:21	29 07:04 (T55) 20:48
13	07:39	14:55 (T91) 07:11	16:32 (T89) 07:28	06:34	07:14 (T53) 05:52	06:34 (T55) 05:33
	17:00 29	15:24 (T91) 17:40	23 16:55 (T89) 19:14	19:50	30 07:44 (T53) 20:22	31 07:05 (T55) 20:48
14	07:39	14:57 (T91) 07:10	16:30 (T89) 07:26	06:33	07:14 (T53) 05:51	06:34 (T55) 05:33
	17:01 27	15:24 (T91) 17:41	26 16:56 (T89) 19:15	19:51	29 07:43 (T53) 20:23	31 07:05 (T55) 20:49
15	07:38	14:58 (T91) 07:09	16:29 (T89) 07:24	06:31	07:13 (T53) 05:50	06:33 (T55) 05:33
	17:03 25	15:23 (T91) 17:42	29 16:58 (T89) 19:17	19:52	29 07:42 (T53) 20:24	32 07:05 (T55) 20:49
16	07:38	15:00 (T91) 07:07	16:28 (T89) 07:22	06:29	07:14 (T53) 05:49	06:33 (T55) 05:33
	17:04 23	15:23 (T91) 17:43	30 16:58 (T89) 19:18	19:53	28 07:42 (T53) 20:25	33 07:06 (T55) 20:49
17	07:37	15:01 (T91) 07:06	16:27 (T89) 07:21	06:28	07:13 (T53) 05:48	06:32 (T55) 05:33
	17:05 21	15:22 (T91) 17:45	32 16:59 (T89) 19:19	19:54	28 07:41 (T53) 20:26	34 07:06 (T55) 20:50
18	07:37	15:03 (T91) 07:04	16:26 (T89) 07:19	06:26	07:14 (T53) 05:47	06:32 (T55) 05:33
	17:06 17	15:20 (T91) 17:46	34 17:00 (T89) 19:20	19:55	27 07:41 (T53) 20:27	34 07:06 (T55) 20:50
19	07:36	15:07 (T91) 07:03	16:26 (T89) 07:17	06:25	07:14 (T53) 05:46	06:32 (T55) 05:33
	17:07 12	15:19 (T91) 17:47	35 17:01 (T89) 19:21	19:56	25 07:39 (T53) 20:28	34 07:06 (T55) 20:51
20	07:35	07:01	16:25 (T89) 07:15	06:23	07:16 (T53) 05:45	06:31 (T55) 05:33
	17:09	17:49	35 17:00 (T89) 19:22	19:57	23 07:39 (T53) 20:29	35 07:06 (T55) 20:51
21	07:35	07:00	16:25 (T89) 07:14	06:22	07:16 (T53) 05:44	06:32 (T55) 05:34
	17:10	17:50	36 17:01 (T89) 19:23	19:59	21 07:37 (T53) 20:30	35 07:07 (T55) 20:51
22	07:34	06:58	16:24 (T89) 07:12	06:20	07:18 (T53) 05:43	06:32 (T55) 05:34
	17:11	17:51	37 17:01 (T89) 19:25	20:00	17 07:35 (T53) 20:31	35 07:07 (T55) 20:51
23	07:33	06:57	16:25 (T89) 07:10	06:18	07:20 (T53) 05:43	06:32 (T55) 05:34
	17:12	17:52	36 17:01 (T89) 19:26	20:00	12 07:32 (T53) 20:32	35 07:07 (T55) 20:52
24	07:33	06:55	16:24 (T89) 07:08	06:17	07:25 (T53) 05:42	06:32 (T55) 05:34
	17:14	17:54	37 17:01 (T89) 19:27	20:01	2 07:27 (T53) 20:33	34 07:06 (T55) 20:52
25	07:32	06:54	16:25 (T89) 07:07	06:15	05:41	06:33 (T55) 05:35
	17:15	17:55	36 17:01 (T89) 19:28	20:02	20:34	34 07:07 (T55) 20:52
26	07:31	06:52	16:25 (T89) 07:05	06:14	05:40	06:32 (T55) 05:35
	17:16	17:56	35 17:00 (T89) 19:29	20:03	20:35	35 07:07 (T55) 20:52
27	07:30	06:51	16:26 (T89) 07:03	06:13	05:40	06:32 (T55) 05:35
	17:17	17:57	34 17:00 (T89) 19:30	20:04	20:36	34 07:06 (T55) 20:52
28	07:29	06:49	16:26 (T89) 07:02	06:11	05:39	06:33 (T55) 05:36
	17:19	17:59	33 16:59 (T89) 19:31	20:05	20:37	34 07:07 (T55) 20:52
29	07:28		07:00	06:10	05:38	06:33 (T55) 05:36
	17:20		19:33	20:06	20:38	33 07:06 (T55) 20:52
30	07:27		06:58	06:08	05:38	06:34 (T55) 05:37
	17:21		19:34	20:08	20:38	33 07:07 (T55) 20:52
31	07:26		06:56	06:07	05:37	06:34 (T55)
	17:23		19:35	20:09	20:39	32 07:06 (T55)
Potential sun hours	294	295	370	401	452	457
Total, worst case	574	559	144	472	794	771
Sun reduction	0.39	0.42	0.44	0.51	0.55	0.59
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.67	0.69	0.69	0.68	0.69	0.69
Total reduction	0.26	0.29	0.31	0.35	0.38	0.40
Total, real	151	163	44	163	299	312

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

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

Project: Baron_SFA

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Calculated: 10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 806 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (567)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 1 row of values: 0.39, 0.42, 0.44, 0.51, 0.55, 0.59, 0.64, 0.91, 0.53, 0.45, 0.29, 0.28

Assumptions for shadow calculations

Operational time

Table with 13 columns (N-Sum) and 1 row of values: 210, 144, 244, 226, 221, 198, 388, 456, 848, 816, 949, 930, 1,255, 1,162, 542, 171, 8,760

Main shadow calculation table with columns for months (July-December) and rows for each day of the month, including start/end times and sun hours.

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

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

Project:

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EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 807 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (568)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40 16:48	15:10 (T91) 07:25 15:49 (T91) 17:24	15:31 (T91) 06:48 18:00	16:43 (T89) 06:55 17:17 (T89) 19:36	06:07 20:09	07:03 (T53) 05:37 20:40
2	07:40 16:49	15:10 (T91) 07:24 15:49 (T91) 17:25	15:34 (T91) 06:46 18:01	16:43 (T89) 06:53 17:18 (T89) 19:37	06:06 20:10	07:04 (T53) 05:36 20:41
3	07:41 16:50	15:10 (T91) 07:23 15:50 (T91) 17:26	15:45 (T91) 06:44 18:02	16:43 (T89) 06:51 17:17 (T89) 19:38	06:04 20:11	07:05 (T53) 05:36 20:42
4	07:41 16:51	15:11 (T91) 07:22 15:50 (T91) 17:28	18:03 06:43	16:42 (T89) 06:49 17:17 (T89) 19:39	06:03 20:12	07:07 (T53) 05:35 20:42
5	07:41 16:52	15:10 (T91) 07:21 15:50 (T91) 17:29	06:41 18:05	16:43 (T89) 06:48 17:17 (T89) 19:40	06:02 20:13	07:10 (T53) 05:35 20:43
6	07:40 16:53	15:11 (T91) 07:20 15:51 (T91) 17:30	06:39 18:06	16:42 (T89) 06:46 17:17 (T89) 19:42	06:00 20:14	07:18 (T53) 05:35 20:44
7	07:40 16:54	15:11 (T91) 07:19 15:51 (T91) 17:32	06:38 18:07	16:42 (T89) 06:44 17:16 (T89) 19:43	05:59 20:15	07:18 (T53) 05:34 20:44
8	07:40 16:55	15:12 (T91) 07:18 15:52 (T91) 17:33	06:36 18:08	17:43 (T89) 06:43 18:16 (T89) 19:44	05:58 20:16	07:18 (T53) 05:34 20:45
9	07:40 16:56	15:12 (T91) 07:16 15:53 (T91) 17:34	06:34 18:09	17:43 (T89) 06:41 18:15 (T89) 19:45	05:57 20:18	07:18 (T53) 05:34 20:46
10	07:40 16:57	15:12 (T91) 07:15 15:53 (T91) 17:36	06:33 18:11	17:44 (T89) 06:39 18:13 (T89) 19:46	05:55 20:19	07:18 (T53) 05:34 20:46
11	07:40 16:58	15:13 (T91) 07:14 15:54 (T91) 17:37	06:31 18:12	17:45 (T89) 06:38 18:13 (T89) 19:47	05:54 20:20	07:18 (T53) 05:33 20:47
12	07:39 16:59	15:13 (T91) 07:13 15:54 (T91) 17:38	06:29 18:13	17:46 (T89) 06:36 18:11 (T89) 19:48	05:53 20:21	07:18 (T53) 05:33 20:48
13	07:39 17:00	15:13 (T91) 07:11 15:54 (T91) 17:40	06:28 18:14	17:47 (T89) 06:34 18:08 (T89) 19:50	05:52 20:22	07:18 (T53) 05:33 20:48
14	07:39 17:01	15:14 (T91) 07:10 15:55 (T91) 17:41	06:26 18:15	17:49 (T89) 06:33 18:06 (T89) 19:51	05:51 20:23	07:18 (T53) 05:33 20:49
15	07:38 17:03	15:14 (T91) 07:09 15:55 (T91) 17:42	06:24 18:17	17:54 (T89) 06:31 18:02 (T89) 19:52	05:50 20:24	07:18 (T53) 05:33 20:49
16	07:38 17:04	15:15 (T91) 07:07 15:56 (T91) 17:43	06:22 18:18	07:06 (T53) 05:49 07:31 (T53) 20:25	05:49 20:25	07:18 (T53) 05:33 20:49
17	07:37 17:05	15:15 (T91) 07:06 15:56 (T91) 17:45	06:21 18:19	07:04 (T53) 05:48 07:31 (T53) 20:26	05:48 20:26	07:18 (T53) 05:33 20:50
18	07:37 17:06	15:15 (T91) 07:04 15:55 (T91) 17:46	06:19 18:20	07:04 (T53) 05:47 07:32 (T53) 20:27	05:47 20:27	07:18 (T53) 05:33 20:50
19	07:36 17:07	15:16 (T91) 07:03 15:56 (T91) 17:47	06:17 18:21	07:02 (T53) 05:46 07:32 (T53) 20:28	05:46 20:28	07:18 (T53) 05:33 20:51
20	07:35 17:09	15:17 (T91) 07:01 15:56 (T91) 17:49	06:15 18:22	07:02 (T53) 05:45 07:33 (T53) 20:29	05:45 20:29	07:18 (T53) 05:33 20:51
21	07:35 17:10	15:17 (T91) 07:00 15:56 (T91) 17:50	06:14 18:23	07:01 (T53) 05:44 07:32 (T53) 20:30	05:44 20:30	07:18 (T53) 05:34 20:51
22	07:34 17:11	15:18 (T91) 06:58 15:56 (T91) 17:51	06:13 18:24	07:01 (T53) 05:43 07:33 (T53) 20:31	05:43 20:31	06:30 (T55) 05:34 20:51
23	07:33 17:12	15:19 (T91) 06:57 15:56 (T91) 17:52	06:12 18:25	07:00 (T53) 05:43 07:32 (T53) 20:32	05:43 20:32	06:28 (T55) 05:34 20:52
24	07:33 17:14	15:20 (T91) 06:55 15:56 (T91) 17:54	06:11 18:26	07:01 (T53) 05:42 07:32 (T53) 20:33	05:42 20:33	06:26 (T55) 05:34 20:52
25	07:32 17:15	15:20 (T91) 06:54 15:55 (T91) 17:55	06:10 18:27	07:00 (T53) 05:42 07:31 (T53) 20:34	05:42 20:34	06:25 (T55) 05:35 20:52
26	07:31 17:16	15:21 (T91) 06:52 15:55 (T91) 17:56	06:09 18:28	07:01 (T53) 05:41 07:31 (T53) 20:35	05:41 20:35	06:24 (T55) 05:35 20:52
27	07:30 17:17	15:22 (T91) 06:51 15:54 (T91) 17:57	06:08 18:29	07:00 (T53) 05:40 07:30 (T53) 20:36	05:40 20:36	06:23 (T55) 05:35 20:52
28	07:29 17:19	15:23 (T91) 06:49 15:53 (T91) 17:59	06:07 18:30	07:01 (T53) 05:39 07:30 (T53) 20:37	05:39 20:37	06:23 (T55) 05:36 20:52
29	07:28 17:20	15:25 (T91) 06:47 15:53 (T91) 17:59	06:06 18:31	07:02 (T53) 05:38 07:29 (T53) 20:38	05:38 20:38	06:22 (T55) 05:36 20:52
30	07:27 17:21	15:26 (T91) 06:45 15:51 (T91) 17:59	06:05 18:32	07:02 (T53) 05:38 07:27 (T53) 20:38	05:38 20:38	06:22 (T55) 05:37 20:52
31	07:26 17:23	15:28 (T91) 06:43 15:50 (T91) 17:59	06:04 18:33	07:02 (T53) 05:37 07:27 (T53) 20:38	05:37 20:39	06:21 (T55) 05:37 20:52
Potential sun hours	294	295	370	401	452	457
Total, worst case	1161	219	434	498	305	1047
Sun reduction	0.39	0.42	0.44	0.51	0.55	0.59
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.69	0.69	0.69	0.68	0.69	0.69
Total reduction	0.27	0.29	0.30	0.35	0.38	0.41
Total, real	311	63	131	172	116	429

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

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

Project:

Baron_SFA

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Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 811 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (570)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	07:40	15:05 (T89) 07:25	15:35 (T89) 06:48	06:55	06:07	19:13 (T83) 05:37	
16:48	58	16:03 (T89) 17:24	20	15:55 (T89) 18:00	19:36	23	19:36 (T83) 20:40
2	07:41	15:05 (T89) 07:24	15:39 (T89) 06:46	06:53	06:06	19:14 (T83) 05:36	
16:49	59	16:04 (T89) 17:25	12	15:51 (T89) 18:01	19:37	21	19:35 (T83) 20:41
3	07:41	15:06 (T89) 07:23	06:44	06:51	06:04	19:15 (T83) 05:36	
16:50	58	16:04 (T89) 17:27	18:02	19:38	20:11	18	19:33 (T83) 20:42
4	07:41	15:06 (T89) 07:22	06:43	06:49	06:03	19:17 (T83) 05:35	
16:51	59	16:05 (T89) 17:28	18:03	19:39	20:12	14	19:31 (T83) 20:42
5	07:41	15:06 (T89) 07:21	06:41	06:48	06:02	19:21 (T83) 05:35	
16:52	58	16:04 (T89) 17:29	18:05	19:40	20:13	6	19:27 (T83) 20:43
6	07:40	15:07 (T89) 07:20	06:39	17:40 (T72) 06:46	06:00	05:35	
16:53	58	16:05 (T89) 17:30	4	17:44 (T72) 19:42	20:14	20:44	
7	07:40	15:07 (T89) 07:19	06:38	8	17:37 (T72) 06:44	05:59	05:34
16:54	58	16:05 (T89) 17:32	8	17:45 (T72) 19:43	20:15	20:45	
8	07:40	15:08 (T89) 07:18	07:36	18:36 (T72) 06:43	06:43	05:58	05:34
16:55	58	16:06 (T89) 17:33	11	18:47 (T72) 19:44	20:16	20:45	
9	07:40	15:09 (T89) 07:16	07:34	18:35 (T72) 06:41	06:41	05:57	05:34
16:56	57	16:06 (T89) 17:34	13	18:48 (T72) 19:45	20:18	20:46	
10	07:40	15:09 (T89) 07:15	07:33	18:33 (T72) 06:39	06:39	05:55	05:34
16:57	57	16:06 (T89) 17:36	16	18:49 (T72) 19:46	20:19	20:46	
11	07:40	15:10 (T89) 07:14	07:31	18:33 (T72) 06:38	06:57 (T55) 05:54	05:33	
16:58	56	16:06 (T89) 17:37	17	18:50 (T72) 19:47	3	07:00 (T55) 20:20	20:47
12	07:39	15:11 (T89) 07:13	07:29	18:33 (T72) 06:36	06:55 (T55) 05:53	05:33	
16:59	56	16:07 (T89) 17:38	18	18:51 (T72) 19:48	8	19:26 (T83) 20:21	20:48
13	07:39	15:11 (T89) 07:11	07:28	18:32 (T72) 06:34	06:54 (T55) 05:52	05:33	
17:00	56	16:07 (T89) 17:40	20	18:52 (T72) 19:50	16	19:27 (T83) 20:22	20:48
14	07:39	15:12 (T89) 07:10	07:26	18:32 (T72) 06:33	06:52 (T55) 05:51	05:33	
17:01	55	16:07 (T89) 17:41	21	18:53 (T72) 19:51	23	19:28 (T83) 20:23	20:49
15	07:38	15:12 (T89) 07:09	07:24	18:33 (T72) 06:31	06:50 (T55) 05:50	05:33	
17:03	55	16:07 (T89) 17:42	22	18:55 (T72) 19:52	28	19:29 (T83) 20:24	20:49
16	07:38	15:13 (T89) 07:07	07:22	18:33 (T72) 06:29	06:49 (T55) 05:49	05:33	
17:04	54	16:07 (T89) 17:43	21	18:54 (T72) 19:53	32	19:30 (T83) 20:25	20:49
17	07:37	15:14 (T89) 07:06	07:21	18:33 (T72) 06:28	06:47 (T55) 05:48	05:33	
17:05	53	16:07 (T89) 17:45	19	18:52 (T72) 19:54	37	19:31 (T83) 20:26	20:50
18	07:37	15:14 (T89) 07:04	07:19	18:34 (T72) 06:26	06:46 (T55) 05:47	05:33	
17:06	53	16:07 (T89) 17:46	16	18:50 (T72) 19:55	40	19:33 (T83) 20:27	20:50
19	07:36	15:16 (T89) 07:03	07:17	18:37 (T72) 06:25	06:44 (T55) 05:46	05:33	
17:07	51	16:07 (T89) 17:47	11	18:48 (T72) 19:56	43	19:33 (T83) 20:28	20:51
20	07:35	15:16 (T89) 07:01	07:15	06:23 06:43 (T55) 05:45	05:33		
17:09	51	16:07 (T89) 17:49	19	19:22 19:57	47	19:35 (T83) 20:29	20:51
21	07:35	15:17 (T89) 07:00	07:14	06:22 06:41 (T55) 05:44	05:34		
17:10	49	16:06 (T89) 17:50	19	19:23 19:59	49	19:35 (T83) 20:30	20:51
22	07:34	15:19 (T89) 06:58	07:12	06:20 06:41 (T55) 05:43	05:34		
17:11	48	16:07 (T89) 17:51	20	20:00 19:37 (T83) 20:31	20:51		
23	07:33	15:19 (T89) 06:57	07:10	06:18 06:41 (T55) 05:43	05:34		
17:12	47	16:06 (T89) 17:52	20	20:00 19:37 (T83) 20:32	20:52		
24	07:33	15:20 (T89) 06:55	07:09	06:17 06:42 (T55) 05:42	05:34		
17:14	45	16:05 (T89) 17:54	19	19:27 19:39 (T83) 20:33	20:52		
25	07:32	15:21 (T89) 06:54	07:07	06:15 06:42 (T55) 05:41	05:35		
17:15	44	16:05 (T89) 17:55	19	19:28 19:39 (T83) 20:34	20:52		
26	07:31	15:23 (T89) 06:52	07:05	06:14 06:44 (T55) 05:40	05:35		
17:16	41	16:04 (T89) 17:56	19	19:29 19:41 (T83) 20:35	20:52		
27	07:30	15:24 (T89) 06:51	07:03	06:13 06:45 (T55) 05:40	05:35		
17:17	39	16:03 (T89) 17:57	19	19:30 19:39 (T83) 20:36	20:52		
28	07:29	15:26 (T89) 06:49	07:02	06:11 06:48 (T55) 05:39	05:36		
17:19	36	16:02 (T89) 17:59	19	19:31 19:39 (T83) 20:37	20:52		
29	07:28	15:27 (T89)	07:00	06:10 19:12 (T83) 05:38	05:36		
17:20	33	16:00 (T89)	19	19:33 19:39 (T83) 20:38	20:52		
30	07:27	15:29 (T89)	06:58	06:08 19:12 (T83) 05:38	05:37		
17:21	30	15:59 (T89)	19	19:34 19:37 (T83) 20:38	20:52		
31	07:26	15:32 (T89)	06:56	05:37	05:37		
17:23	25	15:57 (T89)	19	19:35 20:39	20:39		
Potential sun hours	294	295	370	401	452	457	
Total, worst case	1557	32	217	700	82		
Sun reduction	0.39	0.42	0.44	0.51	0.55		
Oper. time red.	1.00	1.00	1.00	1.00	1.00		
Wind dir. red.	0.69	0.69	0.68	0.66	0.65		
Total reduction	0.27	0.29	0.30	0.34	0.36		
Total, real	419	9	65	238	30		

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

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

Baron_SFA

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10/11/2017 10:32 AM / 51

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 811 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (570)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37 20:52	06:02 20:33	06:35 19:46	06:56 (T55) 18:54	07:07 18:11 (T72)	06:43 17:05
2	05:38 20:52	06:03 20:31	06:36 19:44	06:58 (T55) 18:52	07:08 18:11 (T72)	06:45 17:04
3	05:38 20:52	06:04 20:30	06:37 19:43	07:09 18:50	07:09 18:12 (T72)	06:46 17:02
4	05:39 20:52	06:05 20:29	06:38 19:41	07:10 18:48	07:10 18:12 (T72)	06:47 17:01
5	05:39 20:51	06:06 20:28	06:39 19:39	07:12 18:47	07:12 18:12 (T72)	06:48 17:00
6	05:40 20:51	06:07 20:27	06:40 19:38	07:13 18:45	07:13 18:13 (T72)	06:50 16:59
7	05:41 20:51	06:09 20:25	06:41 19:36	07:14 18:43	07:14 18:14 (T72)	06:51 16:58
8	05:41 20:50	06:10 20:24	06:42 19:34	07:15 18:42	07:15 18:17 (T72)	06:52 16:56
9	05:42 20:50	06:11 20:23	06:44 19:32	07:16 18:40	07:16 18:18 (T72)	06:53 16:55
10	05:43 20:50	06:12 20:21	06:45 19:31	07:17 18:38	07:17 18:15	06:55 16:54
11	05:43 20:49	06:13 20:20	06:46 19:29	07:18 18:37	07:18 18:16	06:56 16:53
12	05:44 20:49	06:14 20:19	06:47 19:27	07:19 18:35	07:19 18:17	06:57 16:52
13	05:45 20:48	06:15 20:17	06:48 19:25	07:21 18:33	07:21 18:18	06:58 16:51
14	05:46 20:48	06:16 20:16	06:49 19:24	07:22 18:32	07:22 18:19	06:59 16:50
15	05:46 20:47	06:17 20:15	06:50 19:22	07:23 18:30	07:23 18:20	07:01 16:49
16	05:47 20:47	06:18 20:13	06:51 19:20	07:24 18:28	07:24 18:21	07:02 16:48
17	05:48 20:46	06:19 20:12	06:52 19:18	07:25 18:27	07:25 18:22	07:03 16:47
18	05:49 20:45	06:20 20:10	06:53 19:17	07:26 18:25	07:26 18:23	07:04 16:46
19	05:50 20:45	06:21 20:09	06:54 19:15	07:28 18:24	07:28 18:24	07:06 16:45
20	05:51 20:44	06:22 20:07	06:55 19:13	07:29 18:22	07:29 18:25	07:07 16:44
21	05:52 20:43	06:23 20:06	06:56 19:11	07:30 18:21	07:30 18:26	07:08 16:43
22	05:53 20:42	06:24 20:04	06:57 19:09	07:31 18:19	07:31 18:28	07:10 16:42
23	05:53 20:41	06:25 20:03	06:58 19:08	07:32 18:18	07:32 18:30	07:11 16:41
24	05:54 20:41	06:27 20:01	06:59 19:06	07:34 18:16	07:34 18:32	07:12 16:40
25	05:55 20:40	06:28 19:58	07:01 19:04	07:35 18:15	07:35 18:34	07:13 16:39
26	05:56 20:39	06:29 19:56	07:02 19:02	07:36 18:13	07:36 18:36	07:14 16:38
27	05:57 20:38	06:30 19:55	07:03 19:01	07:37 18:12	07:37 18:38	07:15 16:37
28	05:58 20:37	06:31 19:53	07:04 18:59	07:38 18:10	07:38 18:40	07:16 16:36
29	05:59 20:36	06:32 19:51	07:05 18:57	07:40 18:09	07:40 18:42	07:18 16:35
30	06:00 20:35	06:33 19:50	07:06 18:55	07:41 18:08	07:41 18:44	07:19 16:34
31	06:01 20:34	06:34 19:48	07:07 18:53	07:42 18:06	07:42 18:46	07:20 16:33
Potential sun hours	464	431	375	343	294	283
Total, worst case		787	128	96	953	1802
Sun reduction		0.91	0.53	0.45	0.29	0.28
Oper. time red.		1.00	1.00	1.00	1.00	1.00
Wind dir. red.		0.66	0.68	0.68	0.69	0.69
Total reduction		0.61	0.36	0.31	0.20	0.19
Total, real		476	46	29	191	348

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

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

Baron_SFA

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10/11/2017 10:32 AM / 52

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 836 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (575)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	07:26	06:48	07:07 (T62)	06:55	06:07
	16:48	17:24	18:00	18:00	18:00	20:09
2	07:41	07:24	06:46	07:06 (T62)	06:53	06:06
	16:49	17:25	18:01	14 07:20 (T62)	19:37	20:10
3	07:41	07:23	06:44	07:04 (T62)	06:51	06:04
	16:50	17:27	18:02	15 07:19 (T62)	19:38	20:11
4	07:41	07:22	06:43	07:03 (T62)	06:50	06:03
	16:51	17:28	18:04	17 07:20 (T62)	19:39	20:12
5	07:41	07:21	06:41	07:01 (T62)	06:48	06:02
	16:52	17:29	18:05	18 07:19 (T62)	19:41	20:13
6	07:41	07:20	06:39	06:59 (T62)	06:46	06:00
	16:53	17:31	18:06	19 07:18 (T62)	19:42	20:14
7	07:40	07:19	06:38	06:57 (T62)	06:44	05:59
	16:54	17:32	18:07	19 07:16 (T62)	19:43	20:15
8	07:40	07:18	06:36	07:56 (T62)	06:43	05:58
	16:55	17:33	19:08	20 08:16 (T62)	19:44	20:17
9	07:40	07:16	06:34	07:55 (T62)	06:41	05:57
	16:56	17:34	19:10	19 08:14 (T62)	19:45	20:18
10	07:40	07:15	06:33	07:57 (T62)	06:39	05:56
	16:57	17:36	19:11	14 08:11 (T62)	19:46	20:19
11	07:40	07:14	06:31	08:01 (T62)	06:38	05:54
	16:58	17:37	19:12	6 08:07 (T62)	19:47	20:20
12	07:39	07:13	06:29		06:36	05:53
	16:59	17:38	19:13		19:48	20:21
13	07:39	07:11	06:28		06:34	05:52
	17:00	17:40	19:14		19:50	20:22
14	07:39	07:10	06:26		06:33	05:51
	17:01	17:41	19:15		19:51	20:23
15	07:38	07:09	06:24		06:31	05:50
	17:03	17:42	19:17		19:52	20:24
16	07:38	07:07	06:23		06:30	05:49
	17:04	17:44	19:18		19:53	20:25
17	07:37	07:06	06:21		06:28	05:48
	17:05	17:45	19:19		19:54	20:26
18	07:37	07:04	06:19		06:26	05:47
	17:06	17:46	19:20		19:55	20:27
19	07:36	07:03	06:17		06:25	05:46
	17:07	17:47	19:21		19:56	20:28
20	07:35	07:01	06:16		06:23	05:45
	17:09	17:49	19:22		19:58	20:29
21	07:35	07:00	06:14		06:22	05:44
	17:10	17:50	19:24		19:59	20:30
22	07:34	06:59	06:12		06:20	05:43
	17:11	17:51	19:25		20:00	15 06:55 (T61)
23	07:33	06:57	06:10		06:19	05:43
	17:12	17:52	19:26		20:00	20 06:58 (T61)
24	07:33	06:55	07:15 (T62)	07:09	06:17	05:42
	17:14	17:54	1 07:16 (T62)	19:27	20:01	24 07:01 (T61)
25	07:32	06:54	07:14 (T62)	07:07	06:16	05:41
	17:15	17:55	4 07:18 (T62)	19:28	20:02	27 07:02 (T61)
26	07:31	06:52	07:12 (T62)	07:05	06:14	05:40
	17:16	17:56	7 07:19 (T62)	19:29	20:03	30 07:04 (T61)
27	07:30	06:51	07:11 (T62)	07:03	06:13	05:39
	17:17	17:57	9 07:20 (T62)	19:30	20:04	33 07:06 (T61)
28	07:29	06:49	07:09 (T62)	07:02	06:11	05:39
	17:19	17:59	11 07:20 (T62)	19:32	20:05	36 07:07 (T61)
29	07:28		07:00		06:10	05:38
	17:20		19:33		20:07	38 07:08 (T61)
30	07:27		06:58		06:08	05:38
	17:21		19:34		20:08	41 07:09 (T61)
31	07:27		06:56			05:37
	17:23		19:35			20:39
Potential sun hours	294	295	370	401	452	457
Total, worst case		32	173	272	1953	2040
Sun reduction		0.42	0.44	0.51	0.55	0.59
Oper. time red.		1.00	1.00	1.00	1.00	1.00
Wind dir. red.		0.65	0.65	0.69	0.69	0.69
Total reduction		0.27	0.29	0.35	0.38	0.41
Total, real		9	50	95	739	828

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

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

Project:

Baron_SFA

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10/11/2017 10:32 AM / 53

Licensed user:

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Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 836 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (575)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December	
1 05:37	06:13 (T61) 06:02	06:25 (T61) 06:35	07:07	06:43	07:20	
20:52	68 07:21 (T61) 20:33	61 07:26 (T61) 19:46	18:54	17:05	16:39	
2 05:38	06:14 (T61) 06:03	06:26 (T61) 06:36	07:08	06:45	07:21	
20:52	68 07:22 (T61) 20:31	60 07:26 (T61) 19:45	18:52	17:04	16:39	
3 05:38	06:13 (T61) 06:04	06:27 (T61) 06:37	07:09	07:37 (T62) 06:46	07:22	
20:52	68 07:21 (T61) 20:30	58 07:25 (T61) 19:43	18:50	11 07:48 (T62) 17:03	16:39	
4 05:39	06:14 (T61) 06:05	06:28 (T61) 06:38	07:10	07:34 (T62) 06:47	07:23	
20:52	68 07:22 (T61) 20:29	57 07:25 (T61) 19:41	18:48	16 07:50 (T62) 17:01	16:39	
5 05:39	06:14 (T61) 06:07	06:29 (T61) 06:39	07:12	07:32 (T62) 06:48	07:24	
20:51	69 07:23 (T61) 20:28	55 07:24 (T61) 19:39	18:47	20 07:52 (T62) 17:00	16:38	
6 05:40	06:14 (T61) 06:08	06:30 (T61) 06:40	07:13	07:33 (T62) 06:50	07:25	
20:51	69 07:23 (T61) 20:27	54 07:24 (T61) 19:38	18:45	19 07:52 (T62) 16:59	16:38	
7 05:41	06:14 (T61) 06:09	06:31 (T61) 06:42	07:14	07:34 (T62) 06:51	07:26	
20:51	69 07:23 (T61) 20:25	52 07:23 (T61) 19:36	18:43	19 07:53 (T62) 16:58	16:38	
8 05:41	06:13 (T61) 06:10	06:32 (T61) 06:43	07:15	07:35 (T62) 06:52	07:27	
20:51	70 07:23 (T61) 20:24	50 07:22 (T61) 19:34	18:42	18 07:53 (T62) 16:57	16:38	
9 05:42	06:14 (T61) 06:11	06:33 (T61) 06:44	07:16	07:37 (T62) 06:54	07:28	
20:50	70 07:24 (T61) 20:23	48 07:21 (T61) 19:33	18:40	17 07:54 (T62) 16:55	16:38	
10 05:43	06:14 (T61) 06:12	06:34 (T61) 06:45	07:17	07:38 (T62) 06:55	07:29	
20:50	70 07:24 (T61) 20:22	46 07:20 (T61) 19:31	18:38	16 07:54 (T62) 16:54	16:38	
11 05:43	06:14 (T61) 06:13	06:35 (T61) 06:46	07:18	07:39 (T62) 06:56	07:30	
20:49	71 07:25 (T61) 20:20	44 07:19 (T61) 19:29	18:37	15 07:54 (T62) 16:53	16:38	
12 05:44	06:14 (T61) 06:14	06:36 (T61) 06:47	07:20	07:40 (T62) 06:57	07:31	
20:49	70 07:24 (T61) 20:19	42 07:18 (T61) 19:27	18:35	13 07:53 (T62) 16:52	16:38	
13 05:45	06:14 (T61) 06:15	06:37 (T61) 06:48	07:21	07:41 (T62) 06:59	07:31	
20:48	71 07:25 (T61) 20:17	40 07:17 (T61) 19:25	18:33	12 07:53 (T62) 16:51	16:38	
14 05:46	06:14 (T61) 06:16	06:38 (T61) 06:49	07:22	07:42 (T62) 07:00	07:32	
20:48	71 07:25 (T61) 20:16	38 07:16 (T61) 19:24	18:32	10 07:52 (T62) 16:50	16:38	
15 05:47	06:15 (T61) 06:17	06:39 (T61) 06:50	07:23	07:44 (T62) 07:01	07:33	
20:47	71 07:26 (T61) 20:15	35 07:14 (T61) 19:22	18:30	8 07:52 (T62) 16:49	16:39	
16 05:47	06:14 (T61) 06:18	06:40 (T61) 06:51	07:24	07:45 (T62) 07:02	07:34	
20:47	71 07:25 (T61) 20:13	32 07:12 (T61) 19:20	18:28	6 07:51 (T62) 16:49	16:39	
17 05:48	06:14 (T61) 06:19	06:41 (T61) 06:52	07:25	07:46 (T62) 07:04	07:34	
20:46	72 07:26 (T61) 20:12	30 07:11 (T61) 19:18	18:27	3 07:49 (T62) 16:48	16:39	
18 05:49	06:14 (T61) 06:20	06:42 (T61) 06:53	07:26	07:05	07:35	
20:45	72 07:26 (T61) 20:10	26 07:08 (T61) 19:17	18:25	16:47	16:40	
19 05:50	06:14 (T61) 06:21	06:43 (T61) 06:54	07:28	07:06	07:36	
20:45	72 07:26 (T61) 20:09	23 07:06 (T61) 19:15	18:24	16:46	16:40	
20 05:51	06:15 (T61) 06:22	06:44 (T61) 06:55	07:29	07:07	07:36	
20:44	72 07:27 (T61) 20:07	19 07:03 (T61) 19:13	18:22	16:45	16:40	
21 05:52	06:15 (T61) 06:23	06:45 (T61) 06:56	07:30	07:08	07:37	
20:43	72 07:27 (T61) 20:06	14 06:59 (T61) 19:11	18:21	16:45	16:41	
22 05:53	06:15 (T61) 06:25	06:46 (T61) 06:57	07:31	07:10	07:37	
20:42	71 07:26 (T61) 20:04	7 06:53 (T61) 19:10	18:19	16:44	16:41	
23 05:54	06:16 (T61) 06:26	06:58	07:32	07:11	07:38	
20:41	70 07:26 (T61) 20:03	19:08	18:18	16:43	16:42	
24 05:55	06:17 (T61) 06:27	07:00	07:34	07:12	07:38	
20:41	70 07:27 (T61) 20:01	19:06	18:16	16:43	16:42	
25 05:55	06:18 (T61) 06:28	07:01	07:35	07:13	07:39	
20:40	69 07:27 (T61) 19:58	19:04	18:15	16:42	16:43	
26 05:56	06:19 (T61) 06:29	07:02	07:36	07:14	07:39	
20:39	68 07:27 (T61) 19:56	19:02	18:13	16:41	16:44	
27 05:57	06:20 (T61) 06:30	07:03	07:37	07:15	07:39	
20:38	67 07:27 (T61) 19:55	19:01	18:12	16:41	16:44	
28 05:58	06:21 (T61) 06:31	07:04	07:39	07:17	07:40	
20:37	66 07:27 (T61) 19:53	18:59	18:10	16:40	16:45	
29 05:59	06:22 (T61) 06:32	07:05	07:40	07:18	07:40	
20:36	64 07:26 (T61) 19:51	18:57	18:09	16:40	16:46	
30 06:00	06:23 (T61) 06:33	07:06	07:41	07:19	07:40	
20:35	63 07:26 (T61) 19:50	18:55	18:08	16:40	16:46	
31 06:01	06:24 (T61) 06:34	07:07	07:42	07:20	07:40	
20:34	62 07:26 (T61) 19:48	18:53	18:06	16:40	16:47	
Potential sun hours	464	431	375	343	294	283
Total, worst case	2144	891	203			
Sun reduction	0.64	0.91	0.45			
Oper. time red.	1.00	1.00	1.00			
Wind dir. red.	0.69	0.69	0.65			
Total reduction	0.44	0.63	0.29			
Total, real	944	558	60			

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

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

Project:
Baron_SFA

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10/11/2017 10:32 AM / 54

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 837 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (576)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	07:40 16:48	07:26 17:24	06:48 18:00	07:16 (T62) 06:55 19:36	06:07 20:09	06:29 (T61) 05:37 20:40	06:28 (T61)
2	07:41 16:49	07:24 17:25	06:46 18:01	07:19 (T62) 06:53 19:37	06:06 20:10	06:29 (T61) 05:36 20:41	06:28 (T61)
3	07:41 16:50	07:23 17:27	06:44 18:02	07:30 (T62) 06:51 19:38	06:04 20:11	06:28 (T61) 05:36 20:42	06:28 (T61)
4	07:41 16:51	07:22 17:28	06:43 18:04	06:50 19:39	06:03 20:12	06:27 (T61) 05:35 20:42	06:29 (T61)
5	07:41 16:52	07:21 17:29	06:41 18:05	06:48 19:41	07:07 (T89) 06:02 20:13	06:27 (T61) 05:35 20:43	06:28 (T61)
6	07:41 16:53	07:20 17:31	06:39 18:06	06:46 19:42	07:09 (T89) 06:00 20:14	06:27 (T61) 05:35 20:44	06:29 (T61)
7	07:40 16:54	07:19 17:32	06:38 18:07	06:44 19:43	07:10 (T89) 06:00 20:15	06:27 (T61) 05:34 20:45	06:30 (T61)
8	07:40 16:55	07:18 17:33	06:36 18:08	06:43 19:44	07:11 (T89) 06:00 20:16	06:27 (T61) 05:34 20:46	06:30 (T61)
9	07:40 16:56	07:16 17:34	06:34 18:09	06:41 19:45	07:02 (T89) 05:58 20:17	06:26 (T61) 05:34 20:47	06:30 (T61)
10	07:40 16:57	07:15 17:36	06:33 18:11	06:39 19:46	07:00 (T89) 05:57 20:18	06:25 (T61) 05:34 20:48	06:30 (T61)
11	07:40 16:58	07:14 17:37	06:31 18:12	06:38 19:47	07:39 (T61) 05:56 20:19	06:25 (T61) 05:33 20:49	06:30 (T61)
12	07:39 16:59	07:13 17:38	07:33 (T62) 07:29 19:13	06:36 19:48	06:59 (T89) 05:56 20:20	06:25 (T61) 05:33 20:50	06:31 (T61)
13	07:39 17:00	07:11 17:40	07:35 (T62) 07:28 19:14	06:34 19:50	07:47 (T61) 05:53 20:21	06:25 (T61) 05:33 20:51	06:31 (T61)
14	07:39 17:01	07:10 17:41	07:37 (T62) 07:26 19:15	06:33 19:51	06:54 (T61) 05:52 20:22	06:25 (T61) 05:33 20:52	06:32 (T61)
15	07:38 17:03	07:09 17:42	07:30 (T62) 07:24 19:17	06:32 19:52	07:50 (T61) 05:51 20:23	06:25 (T61) 05:33 20:53	06:32 (T61)
16	07:38 17:04	07:07 17:44	07:29 (T62) 07:23 19:18	06:31 19:53	07:51 (T61) 05:50 20:24	06:25 (T61) 05:33 20:54	06:32 (T61)
17	07:37 17:05	07:06 17:45	07:27 (T62) 07:21 19:19	06:30 19:54	06:49 (T61) 05:49 20:25	06:25 (T61) 05:33 20:55	06:32 (T61)
18	07:37 17:06	07:04 17:46	07:26 (T62) 07:19 19:20	06:29 19:55	07:54 (T61) 05:48 20:26	06:25 (T61) 05:33 20:56	06:32 (T61)
19	07:36 17:07	07:03 17:47	07:25 (T62) 07:17 19:21	06:28 19:56	06:46 (T61) 05:47 20:27	06:25 (T61) 05:33 20:57	06:32 (T61)
20	07:35 17:09	07:01 17:48	07:23 (T62) 07:16 19:22	06:27 19:57	07:57 (T61) 05:46 20:28	06:25 (T61) 05:33 20:58	06:32 (T61)
21	07:35 17:10	07:00 17:49	07:22 (T62) 07:14 19:23	06:26 19:58	06:44 (T61) 05:45 20:29	06:25 (T61) 05:33 20:59	06:34 (T61)
22	07:34 17:11	06:59 17:51	07:21 (T62) 07:12 19:24	06:25 20:00	07:59 (T61) 05:44 20:30	06:25 (T61) 05:34 21:00	06:34 (T61)
23	07:33 17:12	06:57 17:52	07:19 (T62) 07:10 19:26	06:24 20:01	06:40 (T61) 05:43 20:31	06:25 (T61) 05:34 21:01	06:34 (T61)
24	07:33 17:14	06:55 17:54	07:17 (T62) 07:09 19:27	06:23 20:02	08:00 (T61) 05:43 20:32	06:25 (T61) 05:34 21:02	06:34 (T61)
25	07:32 17:15	06:54 17:55	07:15 (T62) 07:07 19:28	06:22 20:03	06:37 (T61) 05:42 20:33	06:26 (T61) 05:34 21:03	06:34 (T61)
26	07:31 17:16	06:52 17:56	07:14 (T62) 07:05 19:29	06:21 20:04	08:02 (T61) 05:41 20:34	06:26 (T61) 05:35 21:04	06:34 (T61)
27	07:30 17:17	06:51 17:57	07:12 (T62) 07:03 19:30	06:20 20:05	06:34 (T61) 05:40 20:35	06:26 (T61) 05:35 21:05	06:35 (T61)
28	07:29 17:19	06:49 17:59	07:11 (T62) 07:02 19:32	06:19 20:06	08:03 (T61) 05:39 20:36	06:27 (T61) 05:35 21:06	06:35 (T61)
29	07:28 17:20	06:48 18:00	07:10 (T62) 07:00 19:33	06:18 20:07	06:31 (T61) 05:38 20:37	06:27 (T61) 05:36 21:07	06:35 (T61)
30	07:27 17:21	06:47 18:01	07:09 (T62) 06:58 19:34	06:17 20:08	08:04 (T61) 05:38 20:38	06:26 (T61) 05:36 21:08	06:35 (T61)
31	07:27 17:23	06:46 18:02	07:08 (T62) 06:56 19:35	06:16 20:09	06:29 (T61) 05:38 20:39	06:27 (T61) 05:37 21:09	06:35 (T61)
Potential sun hours	294	295	370	401	452	457	2759
Total, worst case		290	28	1629	3042		0.59
Sun reduction		0.42	0.44	0.51	0.55		1.00
Oper. time red.		1.00	1.00	1.00	1.00		0.68
Wind dir. red.		0.65	0.65	0.68	0.68		0.40
Total reduction		0.27	0.28	0.34	0.37		1098
Total, real		79	8	561	1129		

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

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

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217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 837 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (576)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 1 row of sunshine probability values: 0.39, 0.42, 0.44, 0.51, 0.55, 0.59, 0.64, 0.91, 0.53, 0.45, 0.29, 0.28

Assumptions for shadow calculations

Operational time

Table with 13 columns (N-Sum) and 1 row of operational time values: 210, 144, 244, 226, 221, 198, 388, 456, 848, 816, 949, 930, 1,255, 1,162, 542, 171, 8,760

Main shadow calculation table with columns for months (July-December) and rows for each hour of the day (01:00-24:00) showing sun rise/set times and shadow reduction factors.

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

Matrix defining table layout with columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

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Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 851 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (585)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with months (Jan to Dec) and sunshine probability values: 0.39, 0.42, 0.44, 0.51, 0.55, 0.59, 0.64, 0.91, 0.53, 0.45, 0.29, 0.28

Operational time

Table with directions (N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW) and operational hours, plus a note on cut in wind speed.

Main shadow calculation table with columns for months (January to June) and rows for each day of the month, showing sun rise/set times, shadow times, and total real sun hours.

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

Matrix layout table defining columns for Day in month, Sun rise/set, Minutes with flicker, First/Last time with flicker, and WTG causing flicker.

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Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 851 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (585)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

Table with columns for months (July to December) and rows for time slots (e.g., 05:37, 05:40, etc.), showing sun rise/set times and shadow reduction factors.

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

Matrix with 5 columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time).

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Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 907 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (608)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40 16:48	09:18 (T17) 07:25 09:57 (T17) 17:24	09:17 (T17) 06:47 10:17 (T17) 18:00	06:54 19:36	06:07 19:36	18:25 (T29) 05:36 19:04 (T29) 20:40
2	07:40 16:49	09:18 (T17) 07:24 09:58 (T17) 17:25	09:17 (T17) 06:46 10:17 (T17) 18:01	06:53 19:37	06:05 19:37	18:24 (T29) 05:36 19:03 (T29) 20:41
3	07:41 16:50	09:18 (T17) 07:23 09:59 (T17) 17:26	09:17 (T17) 06:44 10:17 (T17) 18:02	06:51 19:38	06:04 19:38	18:24 (T29) 05:35 19:04 (T29) 20:42
4	07:41 16:51	09:18 (T17) 07:22 10:00 (T17) 17:28	09:18 (T17) 06:43 10:17 (T17) 18:03	06:49 19:39	06:03 19:39	18:24 (T29) 05:35 19:05 (T29) 20:42
5	07:41 16:52	09:18 (T17) 07:21 10:00 (T17) 17:29	09:18 (T17) 06:41 10:17 (T17) 18:04	06:48 19:40	06:01 19:40	18:23 (T29) 05:35 19:05 (T29) 20:43
6	07:40 16:52	09:17 (T17) 07:20 10:01 (T17) 17:30	09:19 (T17) 06:39 10:17 (T17) 18:06	06:46 19:41	06:00 19:41	18:22 (T29) 05:34 19:04 (T29) 20:44
7	07:40 16:53	09:17 (T17) 07:19 10:02 (T17) 17:32	09:19 (T17) 06:38 10:15 (T17) 18:07	06:44 19:43	05:59 19:43	18:22 (T29) 05:34 19:05 (T29) 20:44
8	07:40 16:55	09:18 (T17) 07:18 10:03 (T17) 17:33	09:19 (T17) 07:36 10:15 (T17) 19:08	06:42 19:44	05:58 19:44	18:23 (T29) 05:34 19:05 (T29) 20:45
9	07:40 16:56	09:18 (T17) 07:16 10:05 (T17) 17:34	09:20 (T17) 07:34 10:15 (T17) 19:09	06:41 19:45	05:56 19:45	18:23 (T29) 05:33 19:05 (T29) 20:46
10	07:40 16:57	09:17 (T17) 07:15 10:05 (T17) 17:35	09:20 (T17) 07:33 16:48 (T21) 19:10	06:39 19:46	05:55 19:46	18:23 (T29) 05:33 19:05 (T29) 20:46
11	07:40 16:58	09:17 (T17) 07:14 10:06 (T17) 17:37	09:21 (T17) 07:31 16:51 (T21) 19:12	06:37 19:47	05:54 19:47	18:23 (T29) 05:33 19:05 (T29) 20:47
12	07:39 16:59	09:17 (T17) 07:12 10:07 (T17) 17:38	09:22 (T17) 07:29 16:53 (T21) 19:13	06:36 19:48	05:53 19:48	18:23 (T29) 05:33 19:05 (T29) 20:48
13	07:39 17:00	09:17 (T17) 07:11 10:08 (T17) 17:39	09:23 (T17) 07:27 16:54 (T21) 19:14	06:34 19:49	05:52 19:49	18:24 (T29) 05:33 19:05 (T29) 20:48
14	07:38 17:01	09:17 (T17) 07:10 10:09 (T17) 17:41	09:24 (T17) 07:26 16:55 (T21) 19:15	06:32 19:51	05:51 19:51	18:24 (T29) 05:33 19:05 (T29) 20:49
15	07:38 17:02	09:16 (T17) 07:08 10:09 (T17) 17:42	09:26 (T17) 07:24 16:56 (T21) 19:16	06:31 19:52	05:50 19:52	18:24 (T29) 05:33 19:04 (T29) 20:49
16	07:38 17:03	09:17 (T17) 07:07 10:11 (T17) 17:43	09:26 (T17) 07:22 16:56 (T21) 19:18	06:29 19:53	05:49 19:53	18:25 (T29) 05:33 19:04 (T29) 20:49
17	07:37 17:05	09:16 (T17) 07:06 10:11 (T17) 17:45	09:28 (T17) 07:21 16:57 (T21) 19:19	06:28 19:54	05:48 19:54	18:25 (T29) 05:33 19:04 (T29) 20:50
18	07:37 17:06	09:16 (T17) 07:04 10:11 (T17) 17:46	09:30 (T17) 07:19 16:56 (T21) 19:20	06:26 19:55	05:47 19:55	18:25 (T29) 05:33 19:03 (T29) 20:50
19	07:36 17:07	09:16 (T17) 07:03 10:13 (T17) 17:47	09:33 (T17) 07:17 16:57 (T21) 19:21	06:24 19:56	05:46 19:56	18:26 (T29) 05:33 19:03 (T29) 20:51
20	07:35 17:08	09:16 (T17) 07:01 10:13 (T17) 17:48	09:36 (T17) 07:15 16:56 (T21) 19:22	06:23 19:57	05:45 19:57	18:26 (T29) 05:33 19:02 (T29) 20:51
21	07:35 17:09	09:16 (T17) 07:00 10:13 (T17) 17:50	16:34 (T21) 07:14 16:56 (T21) 19:23	06:21 19:58	05:44 19:58	18:27 (T29) 05:33 19:01 (T29) 20:51
22	07:34 17:11	09:16 (T17) 06:58 10:15 (T17) 17:51	16:34 (T21) 07:12 16:54 (T21) 19:24	06:20 19:59	05:43 19:59	18:28 (T29) 05:33 19:02 (T29) 20:51
23	07:33 17:12	09:16 (T17) 06:57 10:15 (T17) 17:52	16:36 (T21) 07:10 16:54 (T21) 19:26	06:18 19:59	05:42 19:59	18:29 (T29) 05:34 19:01 (T29) 20:52
24	07:33 17:13	09:16 (T17) 06:55 10:15 (T17) 17:53	16:37 (T21) 07:08 16:52 (T21) 19:27	06:17 19:59	05:41 19:59	18:29 (T29) 05:34 19:00 (T29) 20:52
25	07:32 17:15	09:16 (T17) 06:54 10:16 (T17) 17:55	16:40 (T21) 07:07 16:50 (T21) 19:28	06:15 19:59	05:40 19:59	18:30 (T29) 05:34 18:59 (T29) 20:52
26	07:31 17:16	09:16 (T17) 06:52 10:16 (T17) 17:56	07:05 19:29	06:14 19:59	05:39 19:59	18:31 (T29) 05:35 18:59 (T29) 20:52
27	07:30 17:17	09:16 (T17) 06:51 10:16 (T17) 17:57	07:03 19:30	06:12 19:59	05:38 19:59	18:32 (T29) 05:35 18:58 (T29) 20:52
28	07:29 17:18	09:16 (T17) 06:49 10:16 (T17) 17:58	07:01 19:31	06:11 19:59	05:37 19:59	18:34 (T29) 05:35 18:58 (T29) 20:52
29	07:28 17:20	09:16 (T17) 06:48 10:17 (T17) 17:59	07:00 19:32	06:10 19:59	05:36 19:59	18:34 (T29) 05:36 18:56 (T29) 20:52
30	07:27 17:21	09:16 (T17) 06:47 10:17 (T17) 18:00	06:58 19:33	06:08 19:59	05:35 19:59	18:36 (T29) 05:36 18:56 (T29) 20:52
31	07:26 17:22	09:16 (T17) 06:46 10:17 (T17) 18:01	06:56 19:35	06:07 19:59	05:34 19:59	18:37 (T29) 05:36 18:54 (T29) 20:52
Potential sun hours	293	295	370	401	452	457
Total, worst case	1624	1258	308	233	1104	34
Sun reduction	0.39	0.42	0.44	0.51	0.55	0.59
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.60	0.62	0.68	0.65	0.65	0.65
Total reduction	0.23	0.26	0.29	0.33	0.35	0.38
Total, real	374	324	91	77	391	13

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

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

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Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 907 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (608)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December
1 05:37 20:52	06:02 18:33 (T29)	06:35 19:15 (T29)	07:07 18:53 (T33)	06:43 17:14 (T33)	07:20 08:50 (T17)
2 05:37 20:52	06:03 18:33 (T29)	42 19:15 (T29) 19:46	07:08 18:53 (T33)	23 17:05 (T21) 17:05	60 16:39 (T17) 09:48 (T17)
3 05:38 20:52	06:04 18:32 (T29)	42 19:15 (T29) 19:44	07:09 18:52 (T33)	21 17:03 (T21) 17:03	54 16:39 (T17) 09:01 (T17)
4 05:38 20:52	06:05 18:32 (T29)	43 19:15 (T29) 19:43	07:10 18:50 (T33)	18 17:02 (T21) 17:02	56 16:38 (T17) 09:02 (T17)
5 05:39 20:51	06:06 18:32 (T29)	43 19:15 (T29) 19:41	07:11 18:48 (T33)	15 17:01 (T21) 17:01	57 16:38 (T17) 09:02 (T17)
6 05:40 20:51	06:07 18:32 (T29)	43 19:15 (T29) 19:39	07:12 18:46 (T33)	9 17:00 (T21) 17:00	57 16:38 (T17) 09:03 (T17)
7 05:40 20:51	06:08 18:32 (T29)	42 19:14 (T29) 19:38	07:14 18:45 (T33)	06:50 18:58 (T33)	59 16:38 (T17) 09:04 (T17)
8 05:41 20:50	06:09 18:32 (T29)	42 19:14 (T29) 19:36	07:15 18:43 (T33)	06:51 18:57 (T33)	59 16:38 (T17) 09:05 (T17)
9 05:42 20:50	06:10 18:32 (T29)	42 19:14 (T29) 19:34	07:16 18:41 (T33)	06:52 18:56 (T33)	60 16:38 (T17) 09:06 (T17)
10 05:42 20:50	2 18:53 (T29) 20:23	41 19:13 (T29) 19:32	07:17 18:40 (T33)	06:53 18:55 (T33)	60 16:38 (T17) 09:07 (T17)
11 05:43 20:49	9 18:49 (T29) 20:21	41 19:13 (T29) 19:31	07:18 18:38 (T33)	06:54 18:54 (T33)	61 16:38 (T17) 09:08 (T17)
12 05:44 20:49	13 18:47 (T29) 20:20	39 19:13 (T29) 19:29	07:19 18:36 (T33)	06:55 18:53 (T33)	61 16:38 (T17) 09:09 (T17)
13 05:45 20:48	16 18:46 (T29) 20:19	38 19:12 (T29) 19:27	07:20 18:35 (T33)	06:56 18:52 (T33)	61 16:38 (T17) 09:10 (T17)
14 05:45 20:48	19 18:45 (T29) 20:17	36 19:11 (T29) 19:25	07:22 18:33 (T33)	06:57 18:51 (T33)	60 16:38 (T17) 09:11 (T17)
15 05:46 20:47	21 18:43 (T29) 20:16	35 19:10 (T29) 19:23	07:23 18:31 (T33)	06:58 18:50 (T33)	60 16:38 (T17) 09:12 (T17)
16 05:47 20:47	23 18:43 (T29) 20:14	33 19:09 (T29) 19:22	07:24 18:30 (T33)	07:00 18:49 (T17)	60 16:38 (T17) 09:13 (T17)
17 05:48 20:46	25 18:42 (T29) 20:13	31 19:08 (T29) 19:20	07:25 18:28 (T33)	07:02 18:48 (T17)	60 16:38 (T17) 09:14 (T17)
18 05:49 20:45	27 18:41 (T29) 20:12	28 19:06 (T29) 19:18	07:26 18:27 (T33)	5 17:19 (T21) 16:48	60 16:38 (T17) 09:15 (T17)
19 05:50 20:45	28 18:41 (T29) 20:10	25 19:04 (T29) 19:16	07:27 18:26 (T33)	12 17:22 (T21) 16:47	60 16:38 (T17) 09:16 (T17)
20 05:50 20:44	30 18:39 (T29) 20:09	21 19:02 (T29) 19:15	07:28 18:25 (T33)	16 17:24 (T21) 16:46	59 16:38 (T17) 09:17 (T17)
21 05:51 20:43	31 18:39 (T29) 20:07	14 18:58 (T29) 19:13	8 17:58 (T33) 18:22	19 17:25 (T21) 16:46	59 16:38 (T17) 09:18 (T17)
22 05:52 20:42	33 18:38 (T29) 20:06	06:56 18:57 (T29)	07:29 18:22 (T33)	17:05 (T21) 17:05	59 16:38 (T17) 09:19 (T17)
23 05:53 20:41	35 18:37 (T29) 20:05	06:57 18:56 (T29)	07:30 18:21 (T33)	17:19 (T21) 16:48	59 16:38 (T17) 09:20 (T17)
24 05:54 20:40	36 18:37 (T29) 20:04	06:58 18:55 (T29)	07:31 18:20 (T33)	17:22 (T21) 16:47	59 16:38 (T17) 09:21 (T17)
25 05:55 20:40	37 18:36 (T29) 20:03	06:59 18:54 (T29)	07:32 18:19 (T33)	17:24 (T21) 16:46	59 16:38 (T17) 09:22 (T17)
26 05:56 20:39	38 18:36 (T29) 20:02	07:00 18:53 (T29)	07:33 18:18 (T33)	17:26 (T21) 16:46	59 16:38 (T17) 09:23 (T17)
27 05:57 20:38	39 18:35 (T29) 20:01	07:01 18:52 (T29)	07:34 18:17 (T33)	17:28 (T21) 16:46	59 16:38 (T17) 09:24 (T17)
28 05:58 20:37	40 18:35 (T29) 20:00	07:02 18:51 (T29)	07:35 18:16 (T33)	17:30 (T21) 16:46	59 16:38 (T17) 09:25 (T17)
29 05:59 20:36	40 18:35 (T29) 20:00	07:03 18:50 (T29)	07:36 18:15 (T33)	17:32 (T21) 16:46	59 16:38 (T17) 09:26 (T17)
30 06:00 20:35	41 18:34 (T29) 20:00	07:04 18:49 (T29)	07:37 18:14 (T33)	17:34 (T21) 16:46	59 16:38 (T17) 09:27 (T17)
31 06:01 20:34	42 18:34 (T29) 20:00	07:05 18:48 (T29)	07:38 18:13 (T33)	17:36 (T21) 16:46	59 16:38 (T17) 09:28 (T17)
Potential sun hours	464	431	375	343	283
Total, worst case	658	721	229	788	1192
Sun reduction	0.64	0.91	0.53	0.45	0.28
Oper. time red.	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.65	0.65	0.68	0.64	0.60
Total reduction	0.41	0.59	0.35	0.29	0.17
Total, real	271	423	81	225	197

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

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

Baron_SFA

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10/11/2017 10:32 AM / 60

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 912 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (610)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

January February March April May June

1	07:40		07:25		06:47		06:54		05:36				
	16:48	40	08:39 (T33)	09:19 (T33)	17:24	37	08:28 (T24)	18:00	66	08:41 (T24)	19:36	20:09	20:40
2	07:41		07:24		06:46		06:53		05:36				
	16:49	39	08:19 (T33)	09:19 (T33)	17:25	41	08:30 (T24)	18:01	65	08:41 (T24)	19:37	20:10	20:41
3	07:41		07:23		06:44		06:51		05:35				
	16:50	38	08:19 (T33)	09:19 (T33)	17:26	43	08:31 (T24)	18:02	64	08:40 (T24)	19:38	20:11	20:42
4	07:41		07:22		06:43		06:49		05:35				
	16:51	37	08:19 (T33)	09:19 (T33)	17:28	46	08:33 (T24)	18:03	64	08:38 (T24)	19:39	20:12	20:42
5	07:41		07:21		06:41		06:48		05:35				
	16:52	36	08:19 (T33)	09:19 (T33)	17:29	49	08:35 (T24)	18:05	67	08:38 (T24)	19:40	20:13	20:43
6	07:41		07:20		06:39		06:46		05:34				
	16:53	35	08:18 (T33)	09:18 (T33)	17:30	51	08:36 (T24)	18:06	68	08:36 (T24)	19:42	20:14	20:44
7	07:40		07:19		06:38		06:44		05:34				
	16:54	34	08:18 (T33)	09:18 (T33)	17:32	54	08:37 (T24)	18:07	70	08:35 (T24)	19:43	20:15	20:45
8	07:40		07:18		06:36		06:43		05:34				
	16:55	33	08:18 (T33)	09:18 (T33)	17:33	56	08:38 (T24)	19:08	70	09:34 (T24)	19:44	20:17	20:45
9	07:40		07:16		06:34		06:41		05:33				
	16:56	31	08:18 (T33)	09:18 (T33)	17:34	57	08:39 (T24)	19:09	70	09:32 (T24)	19:45	20:18	20:46
10	07:40		07:15		06:33		06:39		05:33				
	16:57	30	08:17 (T33)	09:17 (T33)	17:36	59	08:40 (T24)	19:11	70	09:30 (T24)	19:46	20:19	20:46
11	07:40		07:14		06:31		06:37		05:33				
	16:58	28	08:17 (T33)	09:17 (T33)	17:37	61	08:41 (T24)	19:12	69	09:29 (T24)	19:47	20:20	20:47
12	07:39		07:13		06:29		06:36		05:33				
	16:59	25	08:16 (T33)	09:16 (T33)	17:38	63	08:42 (T24)	19:13	67	09:26 (T24)	19:48	20:21	20:48
13	07:39		07:11		06:27		06:34		05:33				
	17:00	23	08:15 (T33)	09:15 (T33)	17:39	64	08:43 (T24)	19:14	63	09:23 (T24)	19:50	20:22	20:48
14	07:39		07:10		06:26		06:33		05:33				
	17:01	20	08:14 (T33)	09:14 (T33)	17:41	65	08:43 (T24)	19:15	60	09:20 (T24)	19:51	20:23	20:49
15	07:38		07:09		06:24		06:31		05:33				
	17:02	16	08:12 (T33)	09:12 (T33)	17:42	66	08:44 (T24)	19:16	55	09:17 (T24)	19:52	20:24	20:49
16	07:38		07:07		06:22		06:29		05:33				
	17:03	10	08:10 (T33)	09:10 (T33)	17:43	66	08:43 (T24)	19:18	47	09:12 (T24)	19:53	20:25	20:50
17	07:37		07:06		06:21		06:28		05:33				
	17:05		17:45		19:19	31	08:11 (T29)	19:54	20:26	20:50			
18	07:37		07:04		06:19		06:26		05:33				
	17:06		17:46		19:20	30	08:10 (T29)	19:55	20:27	20:50			
19	07:36		07:03		06:17		06:24		05:33				
	17:07		17:47		19:21	28	08:10 (T29)	19:56	20:28	20:51			
20	07:35		07:01		06:15		06:23		05:33				
	17:08		17:48		19:22	26	08:08 (T29)	19:57	20:29	20:51			
21	07:35		07:00		06:14		06:21		05:33				
	17:10		17:50		19:23	23	08:06 (T29)	19:59	20:30	20:51			
22	07:34		06:58		06:12		06:20		05:34				
	17:11		17:51		19:25	20	08:04 (T29)	20:00	20:31	20:51			
23	07:33		06:57		06:10		06:18		05:42	05:34			
	17:12		17:52		19:26	15	08:02 (T29)	20:00	20:32	20:52			
24	07:33		06:55		06:08		06:17		05:42	05:34			
	17:13		17:53		19:27	7	07:57 (T29)	20:01	20:33	20:52			
25	07:32		06:54		06:07		06:15		05:41	05:34			
	17:15		17:55		19:28		20:02	20:34	20:52				
26	07:31		06:52		06:05		06:14		05:40	05:35			
	17:16		17:56		19:29		20:03	20:35	20:52				
27	07:30		06:51		06:03		06:12		05:39	05:35			
	17:17		17:57		19:30		20:04	20:36	20:52				
28	07:29		06:49		06:01		06:11		05:39	05:35			
	17:18	14	08:01 (T24)	08:15 (T24)	17:58	66	08:42 (T24)	19:31	20:05	20:37	20:52		
29	07:28		06:47		06:00		06:10		05:38	05:36			
	17:20	22	08:19 (T24)		19:33		20:06	20:38	20:52				
30	07:27		06:45		05:58		06:08		05:37	05:36			
	17:21	28	08:23 (T24)		19:34		20:08	20:38	20:52				
31	07:26		06:43		05:56				05:37				
	17:22	33	08:25 (T24)		19:35				20:39				
Potential sun hours	293		295		370		401	452	457				
Total, worst case	572		1695		1215								
Sun reduction	0.39		0.42		0.44								
Oper. time red.	1.00		1.00		1.00								
Wind dir. red.	0.61		0.63		0.64								
Total reduction	0.24		0.27		0.28								
Total, real	135		450		342								

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

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

Project:
Baron_SFA

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10/11/2017 10:32 AM / 61
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 912 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (610)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37	06:02	06:35	07:07	07:27 (T29)	06:43
	20:52	20:33	19:46	18:53	09:04 (T24)	17:05
2	05:37	06:03	06:36	07:08	07:28 (T29)	06:45
	20:52	20:31	19:44	18:52	09:05 (T24)	17:03
3	05:38	06:04	06:37	07:09	07:30 (T29)	06:46
	20:52	20:30	19:43	18:50	09:08 (T24)	17:02
4	05:38	06:05	06:38	07:10	07:31 (T29)	06:47
	20:52	20:29	19:41	18:48	09:09 (T24)	17:01
5	05:39	06:06	06:39	07:11	07:32 (T29)	06:48
	20:51	20:28	19:39	18:47	09:10 (T24)	17:00
6	05:40	06:07	06:40	07:13	07:33 (T29)	06:50
	20:51	20:27	19:38	18:45	09:11 (T24)	16:59
7	05:40	06:08	06:41	07:14	07:34 (T29)	06:51
	20:51	20:25	19:36	18:43	09:11 (T24)	16:57
8	05:41	06:09	06:42	07:15	07:35 (T29)	06:52
	20:51	20:24	19:34	18:41	09:12 (T24)	16:56
9	05:42	06:10	06:43	07:16	07:36 (T29)	06:53
	20:50	20:23	19:32	18:40	09:13 (T24)	16:55
10	05:42	06:11	06:44	07:17	08:11 (T24)	06:55
	20:50	20:21	19:31	18:38	09:14 (T24)	16:54
11	05:43	06:13	06:46	07:18	08:10 (T24)	06:56
	20:49	20:20	19:29	18:36	09:14 (T24)	16:53
12	05:44	06:14	06:47	07:19	08:09 (T24)	06:57
	20:49	20:19	19:27	18:35	09:14 (T24)	16:52
13	05:45	06:15	06:48	07:21	08:09 (T24)	06:58
	20:48	20:17	19:25	18:33	09:15 (T24)	16:51
14	05:45	06:16	06:49	07:22	08:08 (T24)	07:00
	20:48	20:16	19:24	18:31	09:15 (T24)	16:50
15	05:46	06:17	06:50	07:23	08:08 (T24)	07:01
	20:47	20:15	19:22	18:30	09:16 (T24)	16:49
16	05:47	06:18	06:51	07:24	08:07 (T24)	07:02
	20:47	20:13	19:20	18:28	09:15 (T24)	16:48
17	05:48	06:19	06:52	07:25	08:07 (T24)	07:03
	20:46	20:12	19:18	18:27	09:15 (T24)	16:47
18	05:49	06:20	06:53	07:26	08:06 (T24)	07:05
	20:45	20:10	19:16	18:25	09:15 (T24)	16:47
19	05:50	06:21	06:54	07:28	08:06 (T24)	07:06
	20:45	20:09	19:15	2 07:41 (T29)	09:15 (T24)	16:46
20	05:50	06:22	06:55	07:33 (T29)	08:07 (T24)	07:07
	20:44	20:07	19:13	14 07:47 (T29)	09:15 (T24)	16:45
21	05:51	06:23	06:56	07:31 (T29)	08:06 (T24)	07:08
	20:43	20:06	19:11	19 07:50 (T29)	09:15 (T24)	16:44
22	05:52	06:24	06:57	07:29 (T29)	08:06 (T24)	07:10
	20:42	20:04	19:09	22 07:51 (T29)	09:14 (T24)	16:44
23	05:53	06:25	06:58	07:27 (T29)	08:06 (T24)	07:11
	20:41	20:03	19:08	25 07:52 (T29)	09:14 (T24)	16:43
24	05:54	06:26	06:59	07:25 (T29)	08:07 (T24)	07:12
	20:41	20:01	19:06	28 07:53 (T29)	09:14 (T24)	16:42
25	05:55	06:27	07:00	07:24 (T29)	08:07 (T24)	07:13
	20:40	19:58	19:04	29 07:53 (T29)	09:14 (T24)	16:42
26	05:56	06:29	07:02	07:23 (T29)	08:07 (T24)	07:14
	20:39	19:56	19:02	31 07:54 (T29)	09:13 (T24)	16:41
27	05:57	06:30	07:03	07:23 (T29)	08:08 (T24)	07:15
	20:38	19:54	19:01	43 08:51 (T24)	09:13 (T24)	16:41
28	05:58	06:31	07:04	07:24 (T29)	08:08 (T24)	07:17
	20:37	19:53	18:59	53 08:56 (T24)	09:12 (T24)	16:40
29	05:59	06:32	07:05	07:25 (T29)	08:08 (T24)	07:18
	20:36	19:51	18:57	59 09:00 (T24)	09:11 (T24)	16:40
30	06:00	06:33	07:06	07:26 (T29)	08:09 (T24)	07:19
	20:35	19:50	18:55	63 09:02 (T24)	09:11 (T24)	16:39
31	06:01	06:34		07:42	08:10 (T24)	
	20:34	19:48		18:06	09:10 (T24)	
Potential sun hours	464	431	375	343	294	283
Total, worst case			388	2066	678	1203
Sun reduction			0.53	0.45	0.29	0.28
Oper. time red.			1.00	1.00	1.00	1.00
Wind dir. red.			0.65	0.64	0.63	0.60
Total reduction			0.34	0.28	0.18	0.17
Total, real			133	589	123	203

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

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

Printed/Page 10/11/2017 10:32 AM / 62

Licensed user: EDR 217 Montgomery St. US-SYRACUSE, NY 13202 (315) 471 0688

Calculated: 10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 966 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (632)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time
N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

Table with columns for months (January to June) and rows for shadow calculations. Includes start/end times, potential sun hours, and reduction factors. Total real sun hours are 62.

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

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

Project:
Baron_SFA

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10/11/2017 10:32 AM / 63

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 966 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (632)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1 05:37		06:02	18:23 (T6) 06:35	07:19 (T4) 07:07	17:24 (T37) 06:43	07:20
20:52		20:32	29 18:52 (T6) 19:46	30 07:49 (T4) 18:53	21 17:45 (T37) 17:05	16:39
2 05:37		06:03	18:22 (T6) 06:36	07:19 (T4) 07:08	17:23 (T37) 06:45	07:21
20:52		20:31	31 18:53 (T6) 19:44	30 07:49 (T4) 18:52	22 17:45 (T37) 17:03	16:39
3 05:38		06:04	18:21 (T6) 06:37	07:19 (T4) 07:09	17:21 (T37) 06:46	07:22
20:52		20:30	32 18:53 (T6) 19:43	30 07:49 (T4) 18:50	25 17:46 (T37) 17:02	16:38
4 05:38		06:05	18:20 (T6) 06:38	07:19 (T4) 07:10	17:21 (T37) 06:47	07:23
20:51		20:29	34 18:54 (T6) 19:41	29 07:48 (T4) 18:48	26 17:47 (T37) 17:01	16:38
5 05:39		06:06	18:20 (T6) 06:39	07:19 (T4) 07:11	17:20 (T37) 06:48	07:24
20:51		20:28	34 18:54 (T6) 19:39	28 07:47 (T4) 18:46	27 17:47 (T37) 17:00	16:38
6 05:40		06:07	18:19 (T6) 06:40	07:19 (T4) 07:12	08:41 (T11) 06:50	07:25
20:51		20:27	36 18:55 (T6) 19:37	27 07:46 (T4) 18:45	39 17:46 (T37) 16:58	16:38
7 05:40		06:08	18:18 (T6) 06:41	07:20 (T4) 07:14	08:37 (T11) 06:51	07:26
20:51		20:25	37 18:55 (T6) 19:36	25 07:45 (T4) 18:43	46 17:46 (T37) 16:57	16:38
8 05:41		06:09	18:18 (T6) 06:42	07:21 (T4) 07:15	08:35 (T11) 06:52	07:27
20:50		20:24	37 18:55 (T6) 19:34	22 07:43 (T4) 18:41	49 17:45 (T37) 16:56	16:38
9 05:42		06:10	18:17 (T6) 06:43	07:22 (T4) 07:16	08:33 (T11) 06:53	07:28
20:50		20:23	38 18:55 (T6) 19:32	19 07:41 (T4) 18:40	52 17:44 (T37) 16:55	16:38
10 05:42		06:11	18:17 (T6) 06:44	07:24 (T4) 07:17	08:31 (T11) 06:55	07:29
20:50		20:21	38 18:55 (T6) 19:30	14 07:38 (T4) 18:38	54 17:44 (T37) 16:54	16:38
11 05:43		06:12	18:17 (T6) 06:45	07:27 (T4) 07:18	08:30 (T11) 06:56	07:30
20:49		20:20	38 18:55 (T6) 19:29	7 07:34 (T4) 18:36	55 17:43 (T37) 16:53	16:38
12 05:44		06:13	18:16 (T6) 06:46	07:19	08:29 (T11) 06:57	07:30
20:49		20:19	39 18:55 (T6) 19:27	18:35	55 17:42 (T37) 16:52	16:38
13 05:44		06:15	18:17 (T6) 06:48	07:20	08:28 (T11) 06:58	07:31
20:48		20:17	39 18:56 (T6) 19:25	18:33	53 17:40 (T37) 16:51	16:38
14 05:45		06:16	18:17 (T6) 06:49	07:22	08:27 (T11) 07:00	07:32
20:48		20:16	38 18:55 (T6) 19:23	18:31	51 17:38 (T37) 16:50	16:38
15 05:46		06:17	18:17 (T6) 06:50	07:23	08:26 (T11) 07:01	07:33
20:47		20:14	38 18:55 (T6) 19:22	18:30	46 17:34 (T37) 16:49	16:38
16 05:47		06:18	18:17 (T6) 06:51	07:24	08:27 (T11) 07:02	07:33
20:46		20:13	37 18:54 (T6) 19:20	18:28	36 09:03 (T11) 16:48	16:38
17 05:48		06:19	18:17 (T6) 06:52	07:25	08:26 (T11) 07:03	07:34
20:46		20:12	37 18:54 (T6) 19:18	18:27	37 09:03 (T11) 16:47	16:39
18 05:49		06:20	18:17 (T6) 06:53	07:26	08:26 (T11) 07:05	07:35
20:45		20:10	36 18:53 (T6) 19:16	18:25	37 09:03 (T11) 16:46	16:39
19 05:50		06:21	18:17 (T6) 06:54	07:27	08:26 (T11) 07:06	07:35
20:44		20:09	35 18:52 (T6) 19:15	18:23	36 09:02 (T11) 16:46	16:39
20 05:50		06:22	18:18 (T6) 06:55	07:29	08:26 (T11) 07:07	07:36
20:44		20:07	33 18:51 (T6) 19:13	18:22	37 09:03 (T11) 16:45	16:40
21 05:51		06:23	18:18 (T6) 06:56	07:30	08:26 (T11) 07:08	07:37
20:43		20:05	32 18:50 (T6) 19:11	18:20	36 09:02 (T11) 16:44	16:40
22 05:52		06:24	07:32 (T4) 06:57	07:31	08:26 (T11) 07:09	07:37
20:42		20:04	40 18:49 (T6) 19:09	18:19	35 09:01 (T11) 16:43	16:41
23 05:53		06:25	07:29 (T4) 06:58	07:32	08:27 (T11) 07:11	07:38
20:41		20:02	43 18:47 (T6) 19:07	18:17	33 09:00 (T11) 16:43	16:41
24 05:54		06:26	07:27 (T4) 06:59	07:33	08:28 (T11) 07:12	07:38
20:40		20:01	43 18:45 (T6) 19:06	18:16	32 09:00 (T11) 16:42	16:42
25 05:55		06:27	07:25 (T4) 07:00	07:35	08:29 (T11) 07:13	07:38
20:40		19:58	43 18:43 (T6) 19:04	18:14	30 08:59 (T11) 16:42	16:42
26 05:56	18:34 (T6)	06:28	07:24 (T4) 07:01	07:36	08:29 (T11) 07:14	07:39
20:39	10 18:44 (T6)	19:56	37 18:39 (T6) 19:02	18:13	28 08:57 (T11) 16:41	16:43
27 05:57	18:31 (T6)	06:29	07:22 (T4) 07:03	07:37	08:31 (T11) 07:15	07:39
20:38	15 18:46 (T6)	19:54	27 07:49 (T4) 19:00	18:11	25 08:56 (T11) 16:41	16:44
28 05:58	18:29 (T6)	06:31	07:21 (T4) 07:04	17:34 (T37) 07:38	08:33 (T11) 07:16	07:39
20:37	19 18:48 (T6)	19:53	28 07:49 (T4) 18:59	3 17:37 (T37)	18:10	21 08:54 (T11) 16:40
29 05:59	18:28 (T6)	06:32	07:21 (T4) 07:05	17:29 (T37)	07:40	08:35 (T11) 07:18
20:36	21 18:49 (T6)	19:51	29 07:50 (T4) 18:57	13 17:42 (T37)	18:09	17 08:52 (T11) 16:40
30 06:00	18:26 (T6)	06:33	07:20 (T4) 07:06	17:26 (T37)	07:41	08:38 (T11) 07:19
20:35	25 18:51 (T6)	19:49	30 07:50 (T4) 18:55	17 17:43 (T37)	18:07	10 08:48 (T11) 16:39
31 06:01	18:25 (T6)	06:34	07:19 (T4)	07:42		07:40
20:34	27 18:52 (T6)	19:48	31 07:50 (T4)	18:06		16:47
Potential sun hours	464	431	375	343	294	283
Total, worst case	117	1099	294	1071		910
Sun reduction	0.64	0.91	0.53	0.45		0.28
Oper. time red.	1.00	1.00	1.00	1.00		1.00
Wind dir. red.	0.66	0.67	0.68	0.65		0.64
Total reduction	0.42	0.60	0.36	0.29		0.18
Total, real	50	665	105	312		164

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

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

Baron_SFA

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10/11/2017 10:32 AM / 64

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 967 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (633)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June			
1	07:40	13:08 (T22)	07:25	06:47	07:32 (T11)	06:54	06:07	05:36	18:26 (T6)
	16:48	48 13:56 (T22)	17:24	18:00	17	07:49 (T11)	19:36	20:09	44 19:10 (T6)
2	07:40	13:09 (T22)	07:24	06:46	07:30 (T11)	06:53	06:05	05:36	18:25 (T6)
	16:49	48 13:57 (T22)	17:25	18:01	21	07:51 (T11)	19:37	20:10	45 19:10 (T6)
3	07:40	13:10 (T22)	07:23	06:44	07:28 (T11)	06:51	06:04	05:35	18:25 (T6)
	16:50	47 13:57 (T22)	17:26	18:02	24	07:52 (T11)	19:38	20:11	46 19:11 (T6)
4	07:41	13:09 (T22)	07:22	06:43	07:26 (T11)	06:49	06:03	05:35	18:25 (T6)
	16:51	47 13:56 (T22)	17:28	18:03	27	07:53 (T11)	19:39	20:12	46 19:11 (T6)
5	07:40	13:10 (T22)	07:21	06:41	07:26 (T11)	06:48	06:01	05:35	18:25 (T6)
	16:52	47 13:57 (T22)	17:29	18:04	29	07:55 (T11)	19:40	20:13	46 19:11 (T6)
6	07:40	13:11 (T22)	07:20	06:39	07:24 (T11)	06:46	06:00	05:34	18:26 (T6)
	16:52	46 13:57 (T22)	17:30	18:06	36	17:05 (T37)	19:41	20:14	46 19:12 (T6)
7	07:40	13:12 (T22)	07:19	06:38	07:23 (T11)	06:44	05:59	05:34	18:25 (T6)
	16:53	45 13:57 (T22)	17:31	18:07	46	17:09 (T37)	19:43	20:15	46 19:11 (T6)
8	07:40	13:13 (T22)	07:17	06:36	08:23 (T11)	06:42	05:58	05:34	18:26 (T6)
	16:55	44 13:57 (T22)	17:33	19:08	52	18:12 (T37)	19:44	20:16	46 19:12 (T6)
9	07:40	13:15 (T22)	07:16	06:34	08:22 (T11)	06:41	05:56	05:33	18:26 (T6)
	16:56	43 13:58 (T22)	17:34	19:09	56	18:13 (T37)	19:45	20:17	46 19:12 (T6)
10	07:40	13:15 (T22)	07:15	06:33	08:21 (T11)	06:39	07:11 (T4)	05:55	18:26 (T6)
	16:57	42 13:57 (T22)	17:35	19:10	59	18:14 (T37)	19:46	20:19	47 19:13 (T6)
11	07:39	13:16 (T22)	07:14	06:31	08:21 (T11)	06:37	07:09 (T4)	05:54	18:27 (T6)
	16:58	41 13:57 (T22)	17:37	19:12	62	18:15 (T37)	19:47	20:20	46 19:13 (T6)
12	07:39	13:17 (T22)	07:12	06:29	08:22 (T11)	06:36	07:07 (T4)	05:53	18:27 (T6)
	16:59	39 13:56 (T22)	17:38	19:13	62	18:16 (T37)	19:48	20:21	46 19:13 (T6)
13	07:39	13:18 (T22)	07:11	06:27	08:21 (T11)	06:34	07:05 (T4)	05:52	18:27 (T6)
	17:00	39 13:57 (T22)	17:39	19:14	63	18:16 (T37)	19:49	22 07:27 (T4)	47 19:14 (T6)
14	07:38	13:20 (T22)	07:10	06:26	08:21 (T11)	06:32	07:04 (T4)	05:51	18:36 (T6)
	17:01	37 13:57 (T22)	17:41	19:15	63	18:16 (T37)	19:51	24 07:28 (T4)	47 19:14 (T6)
15	07:38	13:21 (T22)	07:08	06:24	08:21 (T11)	06:31	07:03 (T4)	05:50	18:34 (T6)
	17:02	35 13:56 (T22)	17:42	19:16	61	18:15 (T37)	19:52	25 07:28 (T4)	46 19:14 (T6)
16	07:38	13:23 (T22)	07:07	06:22	08:23 (T11)	06:29	07:03 (T4)	05:49	18:33 (T6)
	17:03	33 13:56 (T22)	17:43	19:17	59	18:16 (T37)	19:53	26 07:29 (T4)	46 19:14 (T6)
17	07:37	13:24 (T22)	07:06	06:20	08:23 (T11)	06:28	07:02 (T4)	05:48	18:31 (T6)
	17:05	30 13:54 (T22)	17:45	19:19	56	18:15 (T37)	19:54	26 07:28 (T4)	46 19:14 (T6)
18	07:37	13:26 (T22)	07:04	06:19	08:24 (T11)	06:26	07:02 (T4)	05:47	18:30 (T6)
	17:06	27 13:53 (T22)	17:46	19:20	52	18:14 (T37)	19:55	27 07:29 (T4)	47 19:15 (T6)
19	07:36	13:29 (T22)	07:03	06:17	08:25 (T11)	06:24	07:01 (T4)	05:46	18:29 (T6)
	17:07	23 13:52 (T22)	17:47	19:21	48	18:13 (T37)	19:56	27 07:28 (T4)	47 19:15 (T6)
20	07:35	13:31 (T22)	07:01	06:15	08:28 (T11)	06:23	07:00 (T4)	05:45	18:28 (T6)
	17:08	19 13:50 (T22)	17:48	19:22	42	18:13 (T37)	19:57	27 07:27 (T4)	47 19:15 (T6)
21	07:35	13:35 (T22)	07:00	06:14	08:32 (T11)	06:21	07:01 (T4)	05:44	18:27 (T6)
	17:09	12 13:47 (T22)	17:50	19:23	31	18:12 (T37)	19:58	26 07:27 (T4)	47 19:15 (T6)
22	07:34		06:58	06:12	17:47 (T37)	06:20	07:01 (T4)	05:43	18:28 (T6)
	17:11		17:51	19:24	23	18:10 (T37)	20:00	25 07:26 (T4)	47 19:16 (T6)
23	07:33		06:57	06:10	17:48 (T37)	06:18	07:01 (T4)	05:42	18:27 (T6)
	17:12		17:52	19:26	20	18:08 (T37)	20:00	25 07:26 (T4)	47 19:16 (T6)
24	07:33		06:55	06:08	17:51 (T37)	06:17	07:01 (T4)	05:41	18:26 (T6)
	17:13		17:53	19:27	15	18:06 (T37)	20:01	23 07:24 (T4)	47 19:16 (T6)
25	07:32		06:54	06:07	17:54 (T37)	06:15	07:03 (T4)	05:41	18:26 (T6)
	17:15		17:55	19:28	8	18:02 (T37)	20:02	21 07:24 (T4)	46 19:15 (T6)
26	07:31		06:52	06:05		06:14	07:04 (T4)	05:40	18:26 (T6)
	17:16		17:56	19:29		20:03	18 07:22 (T4)	42 19:08 (T6)	46 19:16 (T6)
27	07:30		06:51	06:03		06:12	07:05 (T4)	05:39	18:25 (T6)
	17:17		17:57	19:30		20:04	15 07:20 (T4)	43 19:08 (T6)	46 19:16 (T6)
28	07:29		06:49	06:01	07:36 (T11)	06:11	07:08 (T4)	05:39	18:26 (T6)
	17:18		17:58	9 07:45 (T11)	19:31	20:05	10 07:18 (T4)	43 19:09 (T6)	47 19:17 (T6)
29	07:28		06:48	06:00		06:09		05:38	18:25 (T6)
	17:20			19:32		20:06		44 19:09 (T6)	47 19:17 (T6)
30	07:27		06:48	06:08		06:08		05:37	18:25 (T6)
	17:21			19:34		20:07		44 19:09 (T6)	46 19:16 (T6)
31	07:26		06:46	06:06		06:06		05:37	18:25 (T6)
	17:22			19:35		20:07		45 19:10 (T6)	
Potential sun hours	293	295	370	401	452	457			
Total, worst case	792	9	1032	413	667	1389			
Sun reduction	0.39	0.42	0.44	0.51	0.55	0.59			
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00			
Wind dir. red.	0.63	0.65	0.66	0.68	0.65	0.65			
Total reduction	0.24	0.27	0.29	0.34	0.36	0.38			
Total, real	194	2	300	142	238	531			

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

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

Project:

Baron_SFA

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10/11/2017 10:32 AM / 65

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 967 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (633)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December	
1 05:37	18:31 (T6) 06:02	06:35	07:08 (T4) 07:07	08:00 (T11) 06:43	07:20	
20:52	46 19:17 (T6) 20:32	19:46	16 07:24 (T4) 18:53	62 17:55 (T37) 17:05	16:39	
2 05:37	18:30 (T6) 06:03	06:36	07:10 (T4) 07:08	08:00 (T11) 06:45	07:21	
20:52	47 19:17 (T6) 20:31	19:44	11 07:21 (T4) 18:52	61 17:54 (T37) 17:03	16:39	
3 05:38	18:31 (T6) 06:04	06:37	07:09	07:59 (T11) 06:46	07:22	
20:52	46 19:17 (T6) 20:30	19:43	18:50	60 17:52 (T37) 17:02	16:38	
4 05:38	18:32 (T6) 06:05	06:38	07:10	08:00 (T11) 06:47	07:23	
20:51	46 19:18 (T6) 20:29	19:41	18:48	57 17:52 (T37) 17:01	16:38	
5 05:39	18:31 (T6) 06:06	06:39	07:11	08:00 (T11) 06:48	07:24	
20:51	46 19:17 (T6) 20:28	19:39	18:46	54 17:50 (T37) 17:00	16:38	
6 05:40	18:32 (T6) 06:07	06:40	07:12	07:59 (T11) 06:50	07:25	
20:51	46 19:18 (T6) 20:27	19:37	18:45	50 17:47 (T37) 16:58	16:38	
7 05:40	18:31 (T6) 06:08	06:41	07:14	08:00 (T11) 06:51	07:26	
20:51	46 19:17 (T6) 20:25	19:36	18:43	42 17:44 (T37) 16:57	16:38	
8 05:41	18:32 (T6) 06:09	06:42	07:15	08:00 (T11) 06:52	07:27	
20:50	46 19:18 (T6) 20:24	19:34	18:41	30 08:30 (T11) 16:56	16:38	
9 05:42	18:33 (T6) 06:10	06:43	07:16	08:00 (T11) 06:53	07:28	
20:50	45 19:18 (T6) 20:23	19:32	18:40	29 08:29 (T11) 16:55	16:38	
10 05:42	18:32 (T6) 06:11	06:44	07:17	08:01 (T11) 06:55	07:29	
20:50	45 19:17 (T6) 20:21	19:31	18:38	26 08:27 (T11) 16:54	16:38	
11 05:43	18:33 (T6) 06:12	06:45	07:18	08:03 (T11) 06:56	07:30	
20:49	45 19:18 (T6) 20:20	19:29	18:36	23 08:26 (T11) 16:53	16:38	
12 05:44	18:33 (T6) 06:14	06:46	07:19	08:04 (T11) 06:57	07:30	
20:49	45 19:18 (T6) 20:19	19:27	18:35	20 08:24 (T11) 16:52	16:38	
13 05:45	18:34 (T6) 06:15	06:48	07:20	08:07 (T11) 06:58	07:31	
20:48	44 19:18 (T6) 20:17	19:25	18:33	14 08:21 (T11) 16:51	16:38	
14 05:45	18:33 (T6) 06:16	07:20 (T4) 06:49	07:22	08:12 (T11) 07:00	07:32	
20:48	44 19:17 (T6) 20:16	1 07:21 (T4) 19:23	18:31	2 08:14 (T11) 16:50	16:38	
15 05:46	18:34 (T6) 06:17	07:15 (T4) 06:50	07:23	07:01	07:33	
20:47	43 19:17 (T6) 20:14	11 07:26 (T4) 19:22	18:30	16:49	16:38	
16 05:47	18:35 (T6) 06:18	07:12 (T4) 06:51	07:24	07:02	07:33	
20:46	42 19:17 (T6) 20:13	16 07:28 (T4) 19:20	18:28	16:48	16:38	
17 05:48	18:35 (T6) 06:19	07:11 (T4) 06:52	07:25	07:03	07:34	
20:46	42 19:17 (T6) 20:12	19 07:30 (T4) 19:18	18:27	16:47	16:39	
18 05:49	18:36 (T6) 06:20	07:09 (T4) 06:53	17:43 (T37) 07:26	07:05	07:35	
20:45	41 19:17 (T6) 20:10	21 07:30 (T4) 19:16	5 17:48 (T37) 18:25	16:46	16:39	
19 05:50	18:35 (T6) 06:21	07:08 (T4) 06:54	17:38 (T37) 07:27	07:06	07:35	
20:44	41 19:16 (T6) 20:09	23 07:31 (T4) 19:15	14 17:52 (T37) 18:23	16:46	16:39	
20 05:50	18:36 (T6) 06:22	07:07 (T4) 06:55	17:35 (T37) 07:29	07:07	07:36	
20:44	40 19:16 (T6) 20:07	25 07:32 (T4) 19:13	19 17:54 (T37) 18:22	16:45	16:40	
21 05:51	18:37 (T6) 06:23	07:06 (T4) 06:56	17:33 (T37) 07:30	07:08	07:37	
20:43	38 19:15 (T6) 20:05	26 07:32 (T4) 19:11	22 17:55 (T37) 18:20	16:44	11 13:22 (T22) 16:40	
22 05:52	18:37 (T6) 06:24	07:06 (T4) 06:57	17:31 (T37) 07:31	07:09	13:07 (T22) 07:37	
20:42	38 19:15 (T6) 20:04	26 07:32 (T4) 19:09	25 17:56 (T37) 18:19	16:43	19 13:26 (T22) 16:41	
23 05:53	18:38 (T6) 06:25	07:05 (T4) 06:58	08:13 (T11) 07:32	07:11	13:05 (T22) 07:38	
20:41	36 19:14 (T6) 20:02	27 07:32 (T4) 19:07	39 17:57 (T37) 18:17	16:43	23 13:28 (T22) 16:41	
24 05:54	18:39 (T6) 06:26	07:05 (T4) 06:59	08:10 (T11) 07:33	07:12	13:04 (T22) 07:38	
20:40	34 19:13 (T6) 20:01	27 07:32 (T4) 19:06	48 17:58 (T37) 18:16	16:42	27 13:31 (T22) 16:42	
25 05:55	18:40 (T6) 06:27	07:05 (T4) 07:00	08:08 (T11) 07:35	07:13	13:02 (T22) 07:38	
20:40	33 19:13 (T6) 19:58	27 07:32 (T4) 19:04	52 17:58 (T37) 18:14	16:42	30 13:32 (T22) 16:43	
26 05:56	18:41 (T6) 06:28	07:04 (T4) 07:01	08:06 (T11) 07:36	07:14	13:01 (T22) 07:39	
20:39	31 19:12 (T6) 19:56	27 07:31 (T4) 19:02	56 17:58 (T37) 18:13	16:41	33 13:34 (T22) 16:43	
27 05:57	18:43 (T6) 06:29	07:04 (T4) 07:03	08:04 (T11) 07:37	07:15	13:00 (T22) 07:39	
20:38	27 19:10 (T6) 19:54	27 07:31 (T4) 19:00	58 17:57 (T37) 18:11	16:41	35 13:35 (T22) 16:44	
28 05:58	18:44 (T6) 06:31	07:05 (T4) 07:04	08:03 (T11) 07:38	07:16	12:59 (T22) 07:39	
20:37	25 19:09 (T6) 19:53	25 07:30 (T4) 18:59	61 17:57 (T37) 18:10	16:40	37 13:36 (T22) 16:45	
29 05:59	18:46 (T6) 06:32	07:05 (T4) 07:05	08:02 (T11) 07:40	07:18	12:59 (T22) 07:40	
20:36	21 19:07 (T6) 19:51	24 07:29 (T4) 18:57	61 17:56 (T37) 18:09	16:40	39 13:38 (T22) 16:45	
30 06:00	18:48 (T6) 06:33	07:06 (T4) 07:06	08:01 (T11) 07:41	07:19	12:59 (T22) 07:40	
20:35	17 19:05 (T6) 19:49	22 07:28 (T4) 18:55	62 17:56 (T37) 18:07	16:39	39 13:38 (T22) 16:46	
31 06:01	18:51 (T6) 06:34	07:07 (T4)	07:42		07:40	
20:34	11 19:02 (T6) 19:48	19 07:26 (T4)	18:06		16:47	
Potential sun hours	464	431	375	343	294	283
Total, worst case	1197	393	549	530	293	1484
Sun reduction	0.64	0.91	0.53	0.45	0.29	0.28
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.65	0.68	0.67	0.66	0.63	0.63
Total reduction	0.41	0.61	0.35	0.30	0.18	0.18
Total, real	496	241	194	156	53	261

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

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

Baron_SFA

Printed/Page

10/11/2017 10:32 AM / 66

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 968 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (634)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	13:04 (T22)	07:25	06:47		06:07
16:48	50	13:54 (T22)	17:24	18:00		20:09
2	07:40	13:05 (T22)	07:24	06:46		06:05
16:49	49	13:54 (T22)	17:25	18:01	13	07:44 (T11)
3	07:40	13:05 (T22)	07:23	06:44		06:04
16:50	50	13:55 (T22)	17:26	18:02	19	07:46 (T11)
4	07:41	13:05 (T22)	07:22	06:43		06:03
16:51	49	13:54 (T22)	17:28	18:03	23	07:48 (T11)
5	07:40	13:06 (T22)	07:21	06:41		06:01
16:52	48	13:54 (T22)	17:29	18:04	26	07:50 (T11)
6	07:40	13:07 (T22)	07:20	06:39		06:00
16:52	48	13:55 (T22)	17:30	18:06	28	07:50 (T11)
7	07:40	13:08 (T22)	07:19	06:38		05:59
16:53	47	13:55 (T22)	17:31	18:07	35	17:06 (T37)
8	07:40	13:09 (T22)	07:17	06:36		05:58
16:55	46	13:55 (T22)	17:33	19:08	45	18:11 (T37)
9	07:40	13:10 (T22)	07:16	06:34		05:56
16:56	46	13:56 (T22)	17:34	19:09	52	18:13 (T37)
10	07:40	13:10 (T22)	07:15	06:33		05:55
16:57	45	13:55 (T22)	17:35	19:10	55	18:14 (T37)
11	07:39	13:11 (T22)	07:14	06:31		05:54
16:58	44	13:55 (T22)	17:37	19:12	58	18:15 (T37)
12	07:39	13:12 (T22)	07:12	06:29		05:53
16:59	43	13:55 (T22)	17:38	19:13	61	18:16 (T37)
13	07:39	13:13 (T22)	07:11	06:27		05:52
17:00	42	13:55 (T22)	17:39	19:14	62	18:17 (T37)
14	07:38	13:15 (T22)	07:10	06:26		05:51
17:01	40	13:55 (T22)	17:41	19:15	63	18:17 (T37)
15	07:38	13:16 (T22)	07:08	06:24		05:50
17:02	38	13:54 (T22)	17:42	19:16	63	18:17 (T37)
16	07:38	13:18 (T22)	07:07	06:22		05:49
17:03	36	13:54 (T22)	17:43	19:17	62	18:17 (T37)
17	07:37	13:19 (T22)	07:06	06:20		05:48
17:05	34	13:53 (T22)	17:45	19:19	60	18:17 (T37)
18	07:37	13:20 (T22)	07:04	06:19		05:47
17:06	32	13:52 (T22)	17:46	19:20	58	18:16 (T37)
19	07:36	13:23 (T22)	07:03	06:17		05:46
17:07	28	13:51 (T22)	17:47	19:21	54	18:15 (T37)
20	07:35	13:25 (T22)	07:01	06:15		05:45
17:08	25	13:50 (T22)	17:48	19:22	51	18:16 (T37)
21	07:35	13:27 (T22)	07:00	06:14		05:44
17:09	21	13:48 (T22)	17:50	19:23	45	18:14 (T37)
22	07:34	13:32 (T22)	06:58	06:12		05:43
17:11	13	13:45 (T22)	17:51	19:24	36	18:13 (T37)
23	07:33		06:57	07:10		05:42
17:12			17:52	19:26	24	18:11 (T37)
24	07:33		06:55	07:08		05:41
17:13			17:53	19:27	21	18:10 (T37)
25	07:32		06:54	07:07		05:40
17:15			17:55	19:28	17	18:08 (T37)
26	07:31		06:52	07:05		05:39
17:16			17:56	19:29	12	18:05 (T37)
27	07:30		06:51	07:03		05:38
17:17			17:57	19:30		05:37
28	07:29		06:49	07:01		05:36
17:18			17:58	19:31		05:35
29	07:28			07:00		05:34
17:20				19:32		05:33
30	07:27			06:58		05:32
17:21				19:34		05:31
31	07:26			06:56		05:30
17:22				19:35		05:29
Potential sun hours	293	295	370	401	452	457
Total, worst case	874		1043	407	472	1367
Sun reduction	0.39		0.44	0.51	0.55	0.59
Oper. time red.	1.00		1.00	1.00	1.00	1.00
Wind dir. red.	0.63		0.66	0.68	0.65	0.65
Total reduction	0.24		0.29	0.34	0.36	0.38
Total, real	213		303	140	168	521

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

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

Printed/Page
10/11/2017 10:32 AM / 67

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 968 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (634)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December	
1 05:37	18:34 (T6) 06:02	06:35	07:08 (T4) 07:07	07:57 (T11) 06:43	07:20	
20:52	46 19:20 (T6) 20:32	19:46	11 07:19 (T4) 18:53	61 17:55 (T37) 17:05	16:39	
2 05:37	18:34 (T6) 06:03	06:36	07:08	07:56 (T11) 06:45	07:21	
20:52	45 19:19 (T6) 20:31	19:44	18:52	60 17:54 (T37) 17:03	16:39	
3 05:38	18:34 (T6) 06:04	06:37	07:09	07:56 (T11) 06:46	07:22	
20:52	46 19:20 (T6) 20:30	19:43	18:50	57 17:52 (T37) 17:02	16:38	
4 05:38	18:35 (T6) 06:05	06:38	07:10	07:57 (T11) 06:47	07:23	
20:51	45 19:20 (T6) 20:29	19:41	18:48	53 17:51 (T37) 17:01	16:38	
5 05:39	18:35 (T6) 06:06	06:39	07:11	07:57 (T11) 06:48	07:24	
20:51	45 19:20 (T6) 20:28	19:39	18:46	49 17:49 (T37) 17:00	16:38	
6 05:40	18:36 (T6) 06:07	06:40	07:12	07:57 (T11) 06:50	07:25	
20:51	44 19:20 (T6) 20:27	19:37	18:45	41 17:45 (T37) 16:58	16:38	
7 05:40	18:35 (T6) 06:08	06:41	07:14	07:57 (T11) 06:51	07:26	
20:51	45 19:20 (T6) 20:25	19:36	18:43	29 08:26 (T11) 16:57	16:38	
8 05:41	18:36 (T6) 06:09	06:42	07:15	07:58 (T11) 06:52	07:27	
20:50	44 19:20 (T6) 20:24	19:34	18:41	27 08:25 (T11) 16:56	16:38	
9 05:42	18:37 (T6) 06:10	06:43	07:16	07:59 (T11) 06:53	07:28	
20:50	43 19:20 (T6) 20:23	19:32	18:40	24 08:23 (T11) 16:55	16:38	
10 05:42	18:36 (T6) 06:11	06:44	07:17	08:00 (T11) 06:55	07:29	
20:50	43 19:19 (T6) 20:21	19:31	18:38	21 08:21 (T11) 16:54	16:38	
11 05:43	18:37 (T6) 06:12	06:45	07:18	08:03 (T11) 06:56	07:30	
20:49	42 19:19 (T6) 20:20	19:29	18:36	16 08:19 (T11) 16:53	16:38	
12 05:44	18:38 (T6) 06:14	06:46	07:19	08:06 (T11) 06:57	07:30	
20:49	41 19:19 (T6) 20:19	19:27	18:35	9 08:15 (T11) 16:52	16:38	
13 05:45	18:38 (T6) 06:15	06:48	07:20	06:58	07:31	
20:48	42 19:20 (T6) 20:17	19:25	18:33	16:51	16:38	
14 05:45	18:38 (T6) 06:16	07:13 (T4) 06:49	07:22	07:00	07:32	
20:48	40 19:18 (T6) 20:16	11 07:24 (T4) 19:23	18:31	16:50	16:38	
15 05:46	18:39 (T6) 06:17	07:11 (T4) 06:50	07:23	07:01	07:33	
20:47	39 19:18 (T6) 20:14	15 07:26 (T4) 19:22	18:30	16:49	16:38	
16 05:47	18:40 (T6) 06:18	07:09 (T4) 06:51	07:24	07:02	07:33	
20:46	38 19:18 (T6) 20:13	18 07:27 (T4) 19:20	18:28	16:48	16:38	
17 05:48	18:41 (T6) 06:19	07:08 (T4) 06:52	17:42 (T37) 07:25	07:03	07:34	
20:46	37 19:18 (T6) 20:12	20 07:28 (T4) 19:18	10 17:52 (T37) 18:27	16:47	16:39	
18 05:49	18:41 (T6) 06:20	07:06 (T4) 06:53	17:39 (T37) 07:26	07:05	07:35	
20:45	36 19:17 (T6) 20:10	23 07:29 (T4) 19:16	16 17:55 (T37) 18:25	16:46	16:39	
19 05:50	18:41 (T6) 06:21	07:06 (T4) 06:54	17:36 (T37) 07:27	07:06	07:35	
20:44	35 19:16 (T6) 20:09	24 07:30 (T4) 19:15	20 17:56 (T37) 18:23	16:46	16:39	
20 05:50	18:42 (T6) 06:22	07:05 (T4) 06:55	17:34 (T37) 07:29	07:07	07:36	
20:44	33 19:15 (T6) 20:07	25 07:30 (T4) 19:13	23 17:57 (T37) 18:22	13 13:19 (T22) 16:40	52 13:49 (T22)	
21 05:51	18:43 (T6) 06:23	07:04 (T4) 06:56	08:13 (T11) 07:30	07:08	07:37	
20:43	32 19:15 (T6) 20:05	26 07:30 (T4) 19:11	32 17:58 (T37) 18:20	21 13:24 (T22) 16:40	52 13:50 (T22)	
22 05:52	18:45 (T6) 06:24	07:04 (T4) 06:57	08:09 (T11) 07:31	07:09	07:37	
20:42	29 19:14 (T6) 20:04	26 07:30 (T4) 19:09	42 17:59 (T37) 18:19	25 13:26 (T22) 16:41	52 13:50 (T22)	
23 05:53	18:46 (T6) 06:25	07:03 (T4) 06:58	08:07 (T11) 07:32	07:11	07:38	
20:41	27 19:13 (T6) 20:02	27 07:30 (T4) 19:07	48 18:00 (T37) 18:17	28 13:27 (T22) 16:41	52 13:50 (T22)	
24 05:54	18:47 (T6) 06:26	07:03 (T4) 06:59	08:05 (T11) 07:33	07:12	07:38	
20:40	24 19:11 (T6) 20:01	27 07:30 (T4) 19:06	53 18:00 (T37) 18:16	32 13:30 (T22) 16:42	52 13:51 (T22)	
25 05:55	18:49 (T6) 06:27	07:03 (T4) 07:00	08:03 (T11) 07:35	07:13	07:38	
20:40	21 19:10 (T6) 19:58	26 07:29 (T4) 19:04	57 18:00 (T37) 18:14	34 13:31 (T22) 16:43	52 13:51 (T22)	
26 05:56	18:52 (T6) 06:28	07:03 (T4) 07:01	08:01 (T11) 07:36	07:14	07:39	
20:39	15 19:07 (T6) 19:56	26 07:29 (T4) 19:02	60 17:59 (T37) 18:13	36 13:32 (T22) 16:43	52 13:52 (T22)	
27 05:57	18:55 (T6) 06:29	07:03 (T4) 07:03	08:00 (T11) 07:37	07:15	07:39	
20:38	9 19:04 (T6) 19:54	25 07:28 (T4) 19:00	61 17:59 (T37) 18:11	38 13:33 (T22) 16:44	51 13:52 (T22)	
28 05:58	06:31	07:03 (T4) 07:04	07:59 (T11) 07:38	07:16	07:39	
20:37	19:53	24 07:27 (T4) 18:59	62 17:58 (T37) 18:10	40 13:34 (T22) 16:45	51 13:52 (T22)	
29 05:59	06:32	07:04 (T4) 07:05	07:58 (T11) 07:40	07:18	07:40	
20:36	19:51	22 07:26 (T4) 18:57	63 17:58 (T37) 18:09	41 13:36 (T22) 16:45	51 13:52 (T22)	
30 06:00	06:33	07:05 (T4) 07:06	07:57 (T11) 07:41	07:19	07:40	
20:35	19:49	19 07:24 (T4) 18:55	63 17:57 (T37) 18:07	43 13:37 (T22) 16:46	51 13:53 (T22)	
31 06:01	06:34	07:06 (T4)	07:42		07:40	
20:34	19:48	16 07:22 (T4)	18:06		16:47	
Potential sun hours	464	431	375	343	294	283
Total, worst case	986	400	621	447	351	1549
Sun reduction	0.64	0.91	0.53	0.45	0.29	0.28
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.65	0.68	0.67	0.66	0.63	0.63
Total reduction	0.41	0.61	0.35	0.29	0.18	0.18
Total, real	408	246	219	132	64	271

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

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

Project:

Baron_SFA

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10/11/2017 10:32 AM / 68

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 977 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (636)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40 07:25		06:47	07:35 (T9) 06:54	08:25 (T9) 06:07	06:56 (T1) 05:36
	16:48 17:24		18:00	08:04 (T9) 19:36	08:54 (T9) 20:09	19:20 (T34) 20:40
2	07:40 07:24		06:46	07:33 (T9) 06:53	08:27 (T9) 06:05	06:56 (T1) 05:36
	16:49 17:25		18:01	08:07 (T9) 19:37	08:50 (T9) 20:10	19:18 (T34) 20:41
3	07:40 07:23		06:44	07:30 (T9) 06:51	08:30 (T9) 06:04	06:57 (T1) 05:35
	16:50 17:26		18:02	08:08 (T9) 19:38	08:46 (T9) 20:11	19:17 (T34) 20:42
4	07:40 07:22		06:42	07:28 (T9) 06:49	06:03	06:59 (T1) 05:35
	16:51 17:28		18:03	08:09 (T9) 19:39	08:11 (T9) 19:40	19:16 (T26) 20:42
5	07:40 07:21		06:41	07:27 (T9) 06:48	06:01	07:00 (T1) 05:35
	16:52 17:29		18:04	08:11 (T9) 19:40	08:12 (T9) 19:41	19:17 (T26) 20:43
6	07:40 07:20		06:39	07:26 (T9) 06:46	06:00	07:01 (T1) 05:34
	16:53 17:30		18:06	08:12 (T9) 19:41	08:12 (T9) 19:41	19:17 (T26) 20:44
7	07:40 07:19		06:38	07:24 (T9) 06:44	05:59	07:04 (T1) 05:34
	16:54 17:32		18:07	08:12 (T9) 19:43	08:12 (T9) 19:43	19:18 (T26) 20:44
8	07:40 07:17		06:36	08:23 (T9) 06:42	05:58	08:32 (T26) 05:34
	16:55 17:33		19:08	09:14 (T9) 19:44	08:22 (T9) 06:41	19:18 (T26) 20:45
9	07:40 07:16		06:34	08:22 (T9) 06:41	05:56	18:31 (T26) 05:33
	16:56 17:34		19:09	09:14 (T9) 19:45	08:22 (T9) 06:41	19:19 (T26) 20:46
10	07:40 07:15		06:32	08:21 (T9) 06:39	05:55	18:31 (T26) 05:33
	16:57 17:35		19:10	09:14 (T9) 19:46	08:21 (T9) 06:39	19:19 (T26) 20:46
11	07:39 07:14		06:31	08:20 (T9) 06:37	05:54	18:31 (T26) 05:33
	16:58 17:37		19:12	09:14 (T9) 19:47	08:20 (T9) 06:37	19:19 (T26) 20:47
12	07:39 07:12		06:29	08:20 (T9) 06:36	07:09 (T1) 05:53	18:31 (T26) 05:33
	16:59 17:38		19:13	09:15 (T9) 19:48	07:20 (T1) 05:52	19:19 (T26) 20:47
13	07:39 07:11		06:27	08:19 (T9) 06:34	07:05 (T1) 05:52	18:31 (T26) 05:33
	17:00 17:39		19:14	09:15 (T9) 19:49	07:23 (T1) 05:51	19:20 (T26) 20:48
14	07:38 07:10		06:26	08:18 (T9) 06:32	07:03 (T1) 05:51	18:31 (T26) 05:33
	17:01 17:41		19:15	09:14 (T9) 19:50	07:25 (T1) 05:50	19:20 (T26) 20:48
15	07:38 07:08		06:24	08:17 (T9) 06:31	07:01 (T1) 05:50	18:31 (T26) 05:33
	17:02 17:42		19:16	09:14 (T9) 19:52	07:01 (T1) 05:50	19:20 (T26) 20:49
16	07:38 07:07		06:22	08:18 (T9) 06:29	07:00 (T1) 05:49	18:31 (T26) 05:33
	17:03 17:43		19:17	09:14 (T9) 19:53	07:00 (T1) 05:49	19:20 (T26) 20:49
17	07:37 07:06		06:20	08:17 (T9) 06:28	06:58 (T1) 05:48	18:31 (T26) 05:33
	17:05 17:45		19:19	09:14 (T9) 19:54	06:58 (T1) 05:47	19:19 (T26) 20:50
18	07:36 07:04		06:19	08:16 (T9) 06:26	06:58 (T1) 05:47	18:31 (T26) 05:33
	17:06 17:46		19:20	09:13 (T9) 19:55	06:58 (T1) 05:47	19:19 (T26) 20:50
19	07:36 07:03		06:17	08:16 (T9) 06:24	06:57 (T1) 05:46	18:31 (T26) 05:33
	17:07 17:47		19:21	09:12 (T9) 19:56	06:57 (T1) 05:46	19:19 (T26) 20:50
20	07:35 07:01		06:15	08:17 (T9) 06:23	06:55 (T1) 05:45	18:31 (T26) 05:33
	17:08 17:48		19:22	09:12 (T9) 19:57	06:55 (T1) 05:45	19:19 (T26) 20:51
21	07:35 07:00		06:14	08:17 (T9) 06:21	06:55 (T1) 05:44	18:31 (T26) 05:33
	17:10 17:50		19:23	09:11 (T9) 19:58	06:55 (T1) 05:44	19:19 (T26) 20:51
22	07:34 06:58		06:12	08:16 (T9) 06:20	06:54 (T1) 05:43	18:33 (T26) 05:33
	17:11 17:51		19:24	09:10 (T9) 20:00	06:54 (T1) 05:43	19:19 (T26) 20:51
23	07:33 06:57		06:10	08:16 (T9) 06:18	06:55 (T1) 05:42	18:33 (T26) 05:34
	17:12 17:52		19:26	09:09 (T9) 20:00	06:55 (T1) 05:42	19:19 (T26) 20:51
24	07:32 06:55		06:08	08:17 (T9) 06:17	06:54 (T1) 05:41	18:33 (T26) 05:34
	17:13 17:53		19:27	09:08 (T9) 20:01	06:54 (T1) 05:41	19:18 (T26) 20:52
25	07:32 06:54		06:07	08:18 (T9) 06:15	06:54 (T1) 05:41	18:33 (T26) 05:34
	17:15 17:55		19:28	09:07 (T9) 20:02	06:54 (T1) 05:41	19:18 (T26) 20:52
26	07:31 06:52		06:05	08:18 (T9) 06:14	06:55 (T1) 05:40	18:34 (T26) 05:35
	17:16 17:56		19:29	09:05 (T9) 20:03	06:55 (T1) 05:40	19:18 (T26) 20:52
27	07:30 06:51		06:03	08:18 (T9) 06:12	06:54 (T1) 05:39	18:34 (T26) 05:35
	17:17 17:57	15	07:42 (T9) 07:03	09:03 (T9) 20:04	06:54 (T1) 05:39	19:18 (T26) 20:52
28	07:29 06:49		06:01	08:20 (T9) 06:11	06:55 (T1) 05:39	18:35 (T26) 05:35
	17:18 17:58	24	08:02 (T9) 19:31	09:03 (T9) 20:05	06:55 (T1) 05:39	19:18 (T26) 20:52
29	07:28		06:00	08:20 (T9) 06:09	06:54 (T1) 05:38	18:35 (T26) 05:36
	17:20		19:32	09:00 (T9) 20:06	06:54 (T1) 05:38	19:17 (T26) 20:52
30	07:27		06:58	08:21 (T9) 06:08	06:55 (T1) 05:37	18:36 (T26) 05:36
	17:21		19:34	08:58 (T9) 20:07	06:55 (T1) 05:37	19:18 (T26) 20:52
31	07:26		06:56	08:23 (T9)	05:37	18:36 (T26)
	17:22		19:35	08:56 (T9)	20:39	19:17 (T26)
Potential sun hours	293	295	370	401	452	457
Total, worst case		39	1501	1088	1566	960
Sun reduction		0.42	0.44	0.51	0.55	0.59
Oper. time red.		1.00	1.00	1.00	1.00	1.00
Wind dir. red.		0.65	0.65	0.67	0.65	0.65
Total reduction		0.27	0.29	0.34	0.36	0.38
Total, real		11	429	369	563	369

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

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

Project:
Baron_SFA

Printed/Page
10/11/2017 10:32 AM / 69

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 977 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (636)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37	18:47 (T26) 06:02	18:42 (T26) 06:35	07:07	07:58 (T9) 06:43	07:20
	20:52	32 19:19 (T26) 20:32	48 19:30 (T26) 19:46	18:53	55 08:53 (T9) 17:05	16:39
2	05:37	18:47 (T26) 06:03	18:41 (T26) 06:36	07:08	07:58 (T9) 06:45	07:21
	20:52	32 19:19 (T26) 20:31	48 19:29 (T26) 19:44	18:52	55 08:53 (T9) 17:03	16:39
3	05:38	18:47 (T26) 06:04	18:41 (T26) 06:37	07:09	07:58 (T9) 06:46	07:22
	20:52	33 19:20 (T26) 20:30	47 19:28 (T26) 19:43	18:50	54 08:52 (T9) 17:02	16:38
4	05:38	18:47 (T26) 06:05	18:41 (T26) 06:38	07:10	07:59 (T9) 06:47	07:23
	20:51	34 19:21 (T26) 20:29	47 19:28 (T26) 19:41	18:48	53 08:52 (T9) 17:01	16:38
5	05:39	18:46 (T26) 06:06	18:41 (T26) 06:39	07:11	08:00 (T9) 06:48	07:24
	20:51	35 19:21 (T26) 20:28	47 19:28 (T26) 19:39	18:46	51 08:51 (T9) 17:00	16:38
6	05:40	18:47 (T26) 06:07	07:13 (T1) 06:40	07:12	08:00 (T9) 06:50	07:25
	20:51	35 19:22 (T26) 20:26	57 19:27 (T26) 19:37	18:45	49 08:49 (T9) 16:58	16:38
7	05:40	18:46 (T26) 06:08	07:10 (T1) 06:41	07:14	08:01 (T9) 06:51	07:26
	20:51	36 19:22 (T26) 20:25	61 19:26 (T26) 19:36	18:43	47 08:48 (T9) 16:57	16:38
8	05:41	18:46 (T26) 06:09	07:09 (T1) 06:42	07:15	08:01 (T9) 06:52	07:27
	20:50	37 19:23 (T26) 20:24	64 19:26 (T26) 19:34	18:41	45 08:46 (T9) 16:56	16:38
9	05:42	18:46 (T26) 06:10	07:07 (T1) 06:43	08:25 (T9) 07:16	08:02 (T9) 06:53	07:28
	20:50	38 19:24 (T26) 20:23	65 19:25 (T26) 19:32	14 08:39 (T9) 18:40	43 08:45 (T9) 16:55	16:38
10	05:42	18:45 (T26) 06:11	07:06 (T1) 06:44	08:21 (T9) 07:17	08:03 (T9) 06:55	07:29
	20:50	39 19:24 (T26) 20:21	68 19:26 (T34) 19:30	22 08:43 (T9) 18:38	40 08:43 (T9) 16:54	16:38
11	05:43	18:45 (T26) 06:12	07:06 (T1) 06:45	08:18 (T9) 07:18	08:06 (T9) 06:56	07:29
	20:49	39 19:24 (T26) 20:20	70 19:28 (T34) 19:29	28 08:46 (T9) 18:36	36 08:42 (T9) 16:53	16:38
12	05:44	18:45 (T26) 06:14	07:05 (T1) 06:46	08:15 (T9) 07:19	08:07 (T9) 06:57	07:30
	20:49	40 19:25 (T26) 20:19	72 19:29 (T34) 19:27	33 08:48 (T9) 18:35	32 08:39 (T9) 16:52	16:38
13	05:45	18:45 (T26) 06:15	07:04 (T1) 06:48	08:13 (T9) 07:20	08:09 (T9) 06:58	07:31
	20:48	41 19:26 (T26) 20:17	73 19:29 (T34) 19:25	36 08:49 (T9) 18:33	27 08:36 (T9) 16:51	16:38
14	05:45	18:44 (T26) 06:16	07:03 (T1) 06:49	08:11 (T9) 07:22	08:12 (T9) 07:00	07:32
	20:48	42 19:26 (T26) 20:16	74 19:30 (T34) 19:23	39 08:50 (T9) 18:31	21 08:33 (T9) 16:50	16:38
15	05:46	18:44 (T26) 06:17	07:02 (T1) 06:50	08:09 (T9) 07:23	08:17 (T9) 07:01	07:33
	20:47	42 19:26 (T26) 20:14	73 19:30 (T34) 19:22	43 08:52 (T9) 18:30	9 08:26 (T9) 16:49	16:38
16	05:47	18:44 (T26) 06:18	07:02 (T1) 06:51	08:08 (T9) 07:24		07:02 07:33
	20:46	43 19:27 (T26) 20:13	72 19:30 (T34) 19:20	44 08:52 (T9) 18:28		16:48 16:39
17	05:48	18:44 (T26) 06:19	07:01 (T1) 06:52	08:06 (T9) 07:25		07:03 07:34
	20:46	44 19:28 (T26) 20:11	71 19:30 (T34) 19:18	47 08:53 (T9) 18:27		16:47 16:39
18	05:49	18:43 (T26) 06:20	07:01 (T1) 06:53	08:05 (T9) 07:26		07:05 07:35
	20:45	45 19:28 (T26) 20:10	67 19:30 (T34) 19:16	49 08:54 (T9) 18:25		16:46 16:39
19	05:50	18:42 (T26) 06:21	07:01 (T1) 06:54	08:04 (T9) 07:27		07:06 07:35
	20:44	46 19:28 (T26) 20:09	62 19:30 (T34) 19:15	50 08:54 (T9) 18:23		16:46 16:40
20	05:50	18:42 (T26) 06:22	07:00 (T1) 06:55	08:03 (T9) 07:29		07:07 07:36
	20:44	46 19:28 (T26) 20:07	62 19:29 (T34) 19:13	52 08:55 (T9) 18:22		16:45 16:40
21	05:51	18:42 (T26) 06:23	07:00 (T1) 06:56	08:02 (T9) 07:30		07:08 07:37
	20:43	47 19:29 (T26) 20:05	62 19:29 (T34) 19:11	53 08:55 (T9) 18:20		16:44 16:40
22	05:52	18:42 (T26) 06:24	07:00 (T1) 06:57	08:01 (T9) 07:31		07:09 07:37
	20:42	47 19:29 (T26) 20:04	60 19:28 (T34) 19:09	54 08:55 (T9) 18:19		16:43 16:41
23	05:53	18:42 (T26) 06:25	07:00 (T1) 06:58	08:01 (T9) 07:32		07:11 07:38
	20:41	47 19:29 (T26) 20:02	59 19:27 (T34) 19:07	55 08:56 (T9) 18:17		16:43 16:41
24	05:54	18:42 (T26) 06:26	07:01 (T1) 06:59	08:01 (T9) 07:33		07:12 07:38
	20:40	48 19:30 (T26) 20:01	55 19:26 (T34) 19:06	55 08:56 (T9) 18:16		16:42 16:42
25	05:55	18:42 (T26) 06:27	07:01 (T1) 07:00	08:00 (T9) 07:35		07:13 07:38
	20:39	48 19:30 (T26) 19:58	51 19:24 (T34) 19:04	56 08:56 (T9) 18:14		16:42 16:43
26	05:56	18:42 (T26) 06:28	07:01 (T1) 07:01	07:59 (T9) 07:36		07:14 07:39
	20:39	48 19:30 (T26) 19:56	48 19:23 (T34) 19:02	57 08:56 (T9) 18:13		16:41 16:43
27	05:57	18:42 (T26) 06:29	07:02 (T1) 07:03	07:59 (T9) 07:37		07:15 07:39
	20:38	48 19:30 (T26) 19:54	41 19:20 (T34) 19:00	57 08:56 (T9) 18:11		16:41 16:44
28	05:58	18:42 (T26) 06:31	07:03 (T1) 07:04	07:59 (T9) 07:38		07:16 07:39
	20:37	48 19:30 (T26) 19:53	32 19:17 (T34) 18:59	56 08:55 (T9) 18:10		16:40 16:45
29	05:59	18:42 (T26) 06:32	07:04 (T1) 07:05	07:58 (T9) 07:40		07:18 07:40
	20:36	48 19:30 (T26) 19:51	22 07:26 (T1) 18:57	57 08:55 (T9) 18:09		16:40 16:45
30	06:00	18:42 (T26) 06:33	07:06 (T1) 07:06	07:58 (T9) 07:41		07:19 07:40
	20:35	48 19:30 (T26) 19:49	18 07:24 (T1) 18:55	56 08:54 (T9) 18:07		16:39 16:46
31	06:01	18:42 (T26) 06:34	07:09 (T1) 07:09			07:42 07:40
	20:33	48 19:30 (T26) 19:48	11 07:20 (T1) 18:06			18:06 16:47
Potential sun hours	464	431	375	343	294	283
Total, worst case	1304	1707	1013	617		
Sun reduction	0.64	0.91	0.53	0.45		
Oper. time red.	1.00	1.00	1.00	1.00		
Wind dir. red.	0.65	0.66	0.65	0.65		
Total reduction	0.42	0.60	0.34	0.29		
Total, real	543	1028	349	180		

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

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

Baron_SFA

Printed/Page

10/11/2017 10:32 AM / 70

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 979 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (637)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	08:57 (T9) 07:25	08:54 (T9) 06:47	06:54	07:57 (T1) 06:07	05:36
	16:48	30 09:27 (T9) 17:24	55 09:49 (T9) 18:00	19:36	98 18:52 (T34) 20:09	20:40
2	07:40	08:57 (T9) 07:24	08:54 (T9) 06:46	06:53	07:57 (T1) 06:05	05:36
	16:49	31 09:28 (T9) 17:25	55 09:49 (T9) 18:01	19:37	96 18:51 (T34) 20:10	20:41
3	07:40	08:57 (T9) 07:23	08:55 (T9) 06:44	06:51	07:57 (T1) 06:04	05:35
	16:50	32 09:29 (T9) 17:26	54 09:49 (T9) 18:02	19:38	93 18:50 (T34) 20:11	20:42
4	07:40	08:56 (T9) 07:22	08:55 (T9) 06:42	06:49	07:59 (T1) 06:03	05:35
	16:51	33 09:29 (T9) 17:28	53 09:48 (T9) 18:03	19:39	88 18:50 (T34) 20:12	20:42
5	07:40	08:56 (T9) 07:21	08:56 (T9) 06:41	06:48	08:00 (T1) 06:01	05:35
	16:52	35 09:31 (T9) 17:29	52 09:48 (T9) 18:04	19:40	81 18:49 (T34) 20:13	20:43
6	07:40	08:56 (T9) 07:20	08:55 (T9) 06:39	06:46	08:01 (T1) 06:00	05:34
	16:53	36 09:32 (T9) 17:30	52 09:47 (T9) 18:06	19:41	74 18:47 (T34) 20:14	20:44
7	07:40	08:56 (T9) 07:19	08:56 (T9) 06:38	06:44	08:03 (T1) 05:59	05:34
	16:54	37 09:33 (T9) 17:32	51 09:47 (T9) 18:07	19:43	63 18:45 (T34) 20:15	20:44
8	07:40	08:56 (T9) 07:17	08:57 (T9) 07:36	06:42	08:07 (T1) 05:58	05:34
	16:55	38 09:34 (T9) 17:33	50 09:47 (T9) 19:08	19:44	49 18:43 (T34) 20:16	20:45
9	07:40	08:55 (T9) 07:16	08:58 (T9) 07:34	06:41	17:51 (T26) 05:56	05:33
	16:56	39 09:34 (T9) 17:34	48 09:46 (T9) 19:09	19:45	26 18:17 (T26) 20:17	20:46
10	07:40	08:55 (T9) 07:15	08:58 (T9) 07:32	06:39	17:53 (T26) 05:55	05:33
	16:57	41 09:36 (T9) 17:35	46 09:44 (T9) 19:10	19:46	21 18:14 (T26) 20:19	20:46
11	07:39	08:55 (T9) 07:14	08:59 (T9) 07:31	06:37	17:56 (T26) 05:54	05:33
	16:58	42 09:37 (T9) 17:37	45 09:44 (T9) 19:12	19:47	16 18:12 (T26) 20:20	20:47
12	07:39	08:54 (T9) 07:12	09:01 (T9) 07:29	06:36	18:00 (T26) 05:53	05:33
	16:59	43 09:37 (T9) 17:38	42 09:43 (T9) 19:13	19:48	6 18:06 (T26) 20:21	20:47
13	07:39	08:54 (T9) 07:11	09:01 (T9) 07:27	06:34	05:52	05:33
	17:00	45 09:39 (T9) 17:39	40 09:41 (T9) 19:14	19:49	20:22	20:48
14	07:38	08:55 (T9) 07:10	09:03 (T9) 07:26	06:32	05:51	05:33
	17:01	45 09:40 (T9) 17:41	37 09:40 (T9) 19:15	19:50	20:23	20:48
15	07:38	08:54 (T9) 07:08	09:04 (T9) 07:24	08:17 (T1) 06:31	05:50	05:33
	17:02	46 09:40 (T9) 17:42	34 09:38 (T9) 19:16	5 08:22 (T1) 19:52	20:24	20:49
16	07:38	08:53 (T9) 07:07	09:06 (T9) 07:22	08:12 (T1) 06:29	05:49	05:33
	17:03	48 09:41 (T9) 17:43	30 09:36 (T9) 19:17	16 08:28 (T1) 19:53	20:25	20:49
17	07:37	08:54 (T9) 07:06	09:08 (T9) 07:20	08:08 (T1) 06:28	05:48	05:33
	17:05	48 09:42 (T9) 17:45	26 09:34 (T9) 19:19	22 08:30 (T1) 19:54	20:26	20:50
18	07:36	08:53 (T9) 07:04	09:11 (T9) 07:19	08:06 (T1) 06:26	05:47	05:33
	17:06	50 09:43 (T9) 17:46	19 09:30 (T9) 19:20	38 18:16 (T26) 19:55	20:27	20:50
19	07:36	08:54 (T9) 07:03	09:16 (T9) 07:17	08:04 (T1) 06:24	05:46	05:33
	17:07	50 09:44 (T9) 17:47	8 09:24 (T9) 19:21	48 18:19 (T26) 19:56	20:28	20:50
20	07:35	08:53 (T9) 07:01	07:15	08:03 (T1) 06:23	05:45	05:33
	17:08	51 09:44 (T9) 17:48	19:22	56 18:22 (T26) 19:57	20:29	20:51
21	07:35	08:53 (T9) 07:00	07:14	08:01 (T1) 06:21	05:44	05:33
	17:09	52 09:45 (T9) 17:50	19:23	61 18:23 (T26) 19:58	20:30	20:51
22	07:34	08:53 (T9) 06:58	07:12	08:00 (T1) 06:20	05:43	05:33
	17:11	52 09:45 (T9) 17:51	19:24	66 18:24 (T26) 20:00	20:31	20:51
23	07:33	08:54 (T9) 06:57	07:10	07:59 (T1) 06:18	05:42	05:34
	17:12	52 09:46 (T9) 17:52	19:26	70 18:25 (T26) 20:00	20:32	20:51
24	07:32	08:53 (T9) 06:55	07:08	07:59 (T1) 06:17	05:41	05:34
	17:13	54 09:47 (T9) 17:53	19:27	80 18:46 (T34) 20:01	20:33	20:52
25	07:32	08:53 (T9) 06:54	07:07	07:58 (T1) 06:15	05:41	05:34
	17:15	54 09:47 (T9) 17:55	19:28	89 18:49 (T34) 20:02	20:34	20:52
26	07:31	08:53 (T9) 06:52	07:05	07:57 (T1) 06:14	05:40	05:35
	17:16	54 09:47 (T9) 17:56	19:29	94 18:50 (T34) 20:03	20:35	20:52
27	07:30	08:53 (T9) 06:51	07:03	07:56 (T1) 06:12	05:39	05:35
	17:17	55 09:48 (T9) 17:57	19:30	98 18:51 (T34) 20:04	20:36	20:52
28	07:29	08:53 (T9) 06:49	07:01	07:57 (T1) 06:11	05:39	05:35
	17:18	55 09:48 (T9) 17:58	19:31	100 18:52 (T34) 20:05	20:37	20:52
29	07:28	08:53 (T9)	07:00	07:56 (T1) 06:09	05:38	05:36
	17:20	55 09:48 (T9)	19:32	102 18:52 (T34) 20:06	20:37	20:52
30	07:27	08:53 (T9)	06:58	07:56 (T1) 06:08	05:37	05:36
	17:21	55 09:48 (T9)	19:34	102 18:52 (T34) 20:07	20:38	20:52
31	07:26	08:54 (T9)	06:56	07:56 (T1)	05:37	
	17:22	54 09:48 (T9)	19:35	102 18:52 (T34)	20:39	
Potential sun hours	293	295	370	401	452	457
Total, worst case	1412	797	1149	711		
Sun reduction	0.39	0.42	0.44	0.51		
Oper. time red.	1.00	1.00	1.00	1.00		
Wind dir. red.	0.61	0.61	0.67	0.67		
Total reduction	0.24	0.25	0.29	0.34		
Total, real	332	202	334	241		

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

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

Project:

Baron_SFA

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10/11/2017 10:32 AM / 71

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 979 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (637)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37 06:02		06:35	17:55 (T26) 07:07	06:43	08:28 (T9) 07:20
	20:52 20:32		19:46	18:11 (T26) 18:53	17:05	09:14 (T9) 16:39
2	05:37 06:03		06:36	17:52 (T26) 07:08	06:45	08:27 (T9) 07:21
	20:52 20:31		19:44	18:13 (T26) 18:52	17:03	09:15 (T9) 16:39
3	05:38 06:04		06:37	17:49 (T26) 07:09	06:46	08:27 (T9) 07:22
	20:52 20:30		19:43	18:15 (T26) 18:50	17:02	09:16 (T9) 16:38
4	05:38 06:05		06:38	08:04 (T1) 07:10	06:47	08:26 (T9) 07:23
	20:51 20:29		19:41	18:40 (T34) 18:48	17:01	09:17 (T9) 16:38
5	05:39 06:06		06:39	08:00 (T1) 07:11	06:48	08:25 (T9) 07:24
	20:51 20:28		19:39	18:42 (T34) 18:46	17:00	09:17 (T9) 16:38
6	05:40 06:07		06:40	07:52 (T1) 07:12	06:50	08:26 (T9) 07:25
	20:51 20:26		19:37	18:43 (T34) 18:45	16:58	09:18 (T9) 16:38
7	05:40 06:08		06:41	07:55 (T1) 07:14	06:51	08:25 (T9) 07:26
	20:51 20:25		19:36	18:44 (T34) 18:43	16:57	09:18 (T9) 16:38
8	05:41 06:09		06:42	07:53 (T1) 07:15	06:52	08:25 (T9) 07:27
	20:50 20:24		19:34	18:44 (T34) 18:41	16:56	09:18 (T9) 16:38
9	05:42 06:10		06:43	07:52 (T1) 07:16	06:53	08:25 (T9) 07:28
	20:50 20:23		19:32	18:44 (T34) 18:40	16:55	09:19 (T9) 16:38
10	05:42 06:11		06:44	07:50 (T1) 07:17	06:55	08:25 (T9) 07:29
	20:50 20:21		19:30	18:44 (T34) 18:38	16:54	09:19 (T9) 16:38
11	05:43 06:12		06:45	07:49 (T1) 07:18	06:56	08:26 (T9) 07:29
	20:49 20:20		19:29	18:44 (T34) 18:36	16:53	09:20 (T9) 16:38
12	05:44 06:14		06:46	07:48 (T1) 07:19	06:57	08:25 (T9) 07:30
	20:49 20:19		19:27	18:44 (T34) 18:35	16:52	09:20 (T9) 16:38
13	05:45 06:15		06:48	07:47 (T1) 07:20	06:58	08:25 (T9) 07:31
	20:48 20:17		19:25	18:43 (T34) 18:33	16:51	09:20 (T9) 16:38
14	05:45 06:16		06:49	07:47 (T1) 07:22	07:00	08:26 (T9) 07:32
	20:48 20:16		19:23	18:42 (T34) 18:31	16:50	09:21 (T9) 16:38
15	05:46 06:17		06:50	07:46 (T1) 07:23	07:01	08:26 (T9) 07:33
	20:47 20:14		19:22	18:41 (T34) 18:30	16:49	09:21 (T9) 16:38
16	05:47 06:18		06:51	07:46 (T1) 07:24	07:02	08:26 (T9) 07:33
	20:46 20:13		19:20	18:40 (T34) 18:28	16:48	09:20 (T9) 16:38
17	05:48 06:19		06:52	07:45 (T1) 07:25	07:03	08:27 (T9) 07:34
	20:46 20:11		19:18	18:38 (T34) 18:27	16:47	09:21 (T9) 16:39
18	05:49 06:20		06:53	07:45 (T1) 07:26	07:05	08:27 (T9) 07:35
	20:45 20:10		19:16	18:36 (T34) 18:25	16:46	09:21 (T9) 16:39
19	05:50 06:21		06:54	07:45 (T1) 07:27	07:06	08:28 (T9) 07:35
	20:44 20:09		19:15	18:34 (T34) 18:23	16:46	09:20 (T9) 16:39
20	05:50 06:22		06:55	07:45 (T1) 07:29	07:07	08:28 (T9) 07:36
	20:44 20:07		19:13	18:11 (T26) 18:22	16:45	09:20 (T9) 16:40
21	05:51 06:23		06:56	07:45 (T1) 07:30	07:08	08:29 (T9) 07:37
	20:43 20:05		19:11	18:10 (T26) 18:20	16:44	09:21 (T9) 16:40
22	05:52 06:24		06:57	07:45 (T1) 07:31	07:09	08:29 (T9) 07:37
	20:42 20:04		19:09	18:08 (T26) 18:19	16:43	09:20 (T9) 16:41
23	05:53 06:25		06:58	07:46 (T1) 07:32	07:11	08:30 (T9) 07:38
	20:41 20:02		19:07	18:06 (T26) 18:17	16:43	09:20 (T9) 16:41
24	05:54 06:26		06:59	07:48 (T1) 07:33	07:12	08:31 (T9) 07:38
	20:40 20:01		19:06	18:05 (T26) 18:16	16:42	09:21 (T9) 16:42
25	05:55 06:27		07:00	07:49 (T1) 07:35	07:13	08:32 (T9) 07:38
	20:39 19:58		19:04	18:01 (T26) 18:14	16:42	09:20 (T9) 16:43
26	05:56 06:28		07:01	07:50 (T1) 07:36	07:14	08:32 (T9) 07:39
	20:39 19:56		19:02	17:55 (T26) 18:13	16:41	09:20 (T9) 16:43
27	05:57 06:29		07:03	07:52 (T1) 07:37	07:15	08:33 (T9) 07:39
	20:38 19:54		19:00	18:10 (T1) 18:11	16:41	09:20 (T9) 16:44
28	05:58 06:31		07:04	07:55 (T1) 07:38	07:16	08:34 (T9) 07:39
	20:37 19:53		18:59	11 08:06 (T1) 18:10	16:40	09:19 (T9) 16:45
29	05:59 06:32		07:05	07:40	07:18	08:35 (T9) 07:40
	20:36 19:51		18:57	18:09	16:40	09:20 (T9) 16:45
30	06:00 06:33		07:06	07:41	07:19	08:36 (T9) 07:40
	20:35 19:49		18:55	18:07	16:39	09:19 (T9) 16:46
31	06:01 06:34	18:00 (T26)		07:42	07:20	07:40
	20:33 19:48	7 18:07 (T26)		18:06	16:45	16:47
Potential sun hours	464	431	375	343	294	283
Total, worst case		7	1876	293	1531	910
Sun reduction		0.91	0.53	0.45	0.29	0.28
Oper. time red.		1.00	1.00	1.00	1.00	1.00
Wind dir. red.		0.68	0.67	0.61	0.61	0.61
Total reduction		0.61	0.35	0.27	0.27	0.17
Total, real		4	659	80	268	154

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

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

Project:
Baron_SFA

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10/11/2017 10:32 AM / 72
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 991 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (643)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	07:25	06:47	07:34 (T52) 06:54	18:31 (T44) 06:07	19:03 (T59) 05:36
	16:48	17:24	18:00	17:13 (T47) 19:36	18:45 (T44) 20:09	19:19 (T59) 20:40
2	07:40	07:24	06:46	07:33 (T52) 06:53	18:34 (T44) 06:05	19:04 (T59) 05:36
	16:49	17:25	18:01	17:13 (T47) 19:37	18:42 (T44) 20:10	19:16 (T59) 20:41
3	07:40	07:23	06:44	07:32 (T52) 06:51	18:04	19:07 (T59) 05:35
	16:50	17:26	18:02	17:12 (T47) 19:38	20:11	19:13 (T59) 20:41
4	07:40	07:22	06:43	07:32 (T52) 06:49	18:03	19:07 (T59) 05:35
	16:51	17:28	18:03	17:10 (T47) 19:39	20:12	19:13 (T59) 20:41
5	07:40	07:21	06:41	07:32 (T52) 06:48	18:01	19:07 (T59) 05:35
	16:52	17:29	18:04	17:10 (T47) 19:40	20:13	19:13 (T59) 20:41
6	07:40	07:20	06:39	07:31 (T52) 06:46	18:00	19:07 (T59) 05:35
	16:53	17:30	18:06	17:08 (T47) 19:41	20:14	19:13 (T59) 20:41
7	07:40	07:19	06:38	07:30 (T52) 06:44	17:59	19:07 (T59) 05:35
	16:54	17:32	18:07	17:06 (T47) 19:43	20:15	19:13 (T59) 20:41
8	07:40	07:17	06:36	08:31 (T52) 06:42	17:58	19:07 (T59) 05:35
	16:55	17:33	18:08	18:03 (T47) 19:44	20:16	19:13 (T59) 20:41
9	07:40	07:16	06:34	07:55 (T60) 06:41	17:56	19:07 (T59) 05:35
	16:56	17:34	18:09	09:36 (T52) 19:45	20:17	19:13 (T59) 20:41
10	07:40	07:15	06:33	07:52 (T60) 06:39	17:55	19:07 (T59) 05:35
	16:57	17:35	18:10	09:35 (T52) 19:46	20:19	19:13 (T59) 20:41
11	07:39	07:14	06:31	07:50 (T60) 06:37	17:54	19:07 (T59) 05:35
	16:58	17:37	18:12	09:34 (T52) 19:47	20:20	19:13 (T59) 20:41
12	07:39	07:12	06:29	07:49 (T60) 06:36	17:53	19:07 (T59) 05:35
	16:59	17:38	18:13	09:34 (T52) 19:48	20:21	19:13 (T59) 20:41
13	07:39	07:11	06:27	07:47 (T60) 06:34	17:52	19:07 (T59) 05:35
	17:00	17:39	18:14	09:33 (T52) 19:49	20:22	19:13 (T59) 20:41
14	07:38	07:10	06:26	07:45 (T60) 06:32	17:51	19:07 (T59) 05:35
	17:01	17:41	18:15	09:32 (T52) 19:50	20:23	19:13 (T59) 20:41
15	07:38	07:08	07:59 (T52) 07:24	07:43 (T60) 06:31	19:10 (T59) 05:50	19:13 (T59) 20:41
	17:02	17:42	18:16	09:31 (T52) 19:52	20:24	19:13 (T59) 20:41
16	07:37	07:07	07:54 (T52) 07:22	07:42 (T60) 06:29	19:07 (T59) 05:49	19:13 (T59) 20:41
	17:03	17:43	18:17	09:31 (T52) 19:53	20:25	19:13 (T59) 20:41
17	07:37	07:06	07:51 (T52) 07:21	07:40 (T60) 06:28	19:04 (T59) 05:48	19:13 (T59) 20:41
	17:05	17:45	18:19	09:30 (T52) 19:54	20:26	19:13 (T59) 20:41
18	07:36	07:04	07:48 (T52) 07:19	07:38 (T60) 06:26	19:03 (T59) 05:47	19:13 (T59) 20:41
	17:06	17:46	18:20	09:29 (T52) 19:55	20:27	19:13 (T59) 20:41
19	07:36	07:03	07:46 (T52) 07:17	07:37 (T60) 06:24	19:02 (T59) 05:46	19:13 (T59) 20:41
	17:07	17:47	18:21	09:28 (T52) 19:56	20:28	19:13 (T59) 20:41
20	07:35	07:01	07:44 (T52) 07:15	07:37 (T60) 06:23	19:00 (T59) 05:45	19:13 (T59) 20:41
	17:08	17:48	18:22	09:27 (T52) 19:57	20:29	19:13 (T59) 20:41
21	07:35	07:00	07:43 (T52) 07:14	07:37 (T60) 06:21	19:00 (T59) 05:44	19:13 (T59) 20:41
	17:10	17:50	18:23	09:26 (T52) 19:58	20:30	19:13 (T59) 20:41
22	07:34	06:58	07:41 (T52) 07:12	07:37 (T60) 06:20	18:59 (T59) 05:43	19:13 (T59) 20:41
	17:11	17:51	18:24	09:25 (T52) 19:59	20:31	19:13 (T59) 20:41
23	07:33	06:57	07:40 (T52) 07:10	07:37 (T60) 06:18	18:59 (T59) 05:42	19:13 (T59) 20:41
	17:12	17:52	18:25	09:24 (T52) 19:59	20:32	19:13 (T59) 20:41
24	07:32	06:55	07:38 (T52) 07:08	07:36 (T60) 06:17	19:00 (T59) 05:42	19:13 (T59) 20:41
	17:13	17:53	18:26	09:23 (T52) 19:59	20:33	19:13 (T59) 20:41
25	07:32	06:54	07:38 (T52) 07:07	07:36 (T60) 06:15	18:59 (T59) 05:41	19:13 (T59) 20:41
	17:15	17:55	18:27	09:22 (T52) 19:59	20:34	19:13 (T59) 20:41
26	07:31	06:52	07:36 (T52) 07:05	07:36 (T60) 06:14	19:00 (T59) 05:40	19:13 (T59) 20:41
	17:16	17:56	18:28	09:21 (T52) 19:59	20:35	19:13 (T59) 20:41
27	07:30	06:51	07:35 (T52) 07:03	07:41 (T60) 06:12	18:59 (T59) 05:39	19:13 (T59) 20:41
	17:17	17:57	18:29	09:20 (T52) 19:59	20:36	19:13 (T59) 20:41
28	07:29	06:49	07:35 (T52) 07:01	07:43 (T60) 06:11	19:00 (T59) 05:39	19:13 (T59) 20:41
	17:18	17:58	18:30	09:19 (T52) 19:59	20:37	19:13 (T59) 20:41
29	07:28		07:00	07:47 (T60) 06:09	19:00 (T59) 05:38	19:13 (T59) 20:41
	17:20		19:32	09:18 (T52) 19:59	20:38	19:13 (T59) 20:41
30	07:27		06:58	18:28 (T44) 06:08	19:01 (T59) 05:37	19:13 (T59) 20:41
	17:21		19:34	09:17 (T52) 19:59	20:39	19:13 (T59) 20:41
31	07:26		06:56	18:29 (T44) 06:07	19:02 (T59) 05:37	19:13 (T59) 20:41
	17:22		19:35	09:16 (T52) 19:59	20:40	19:13 (T59) 20:41
Potential sun hours	294	295	370	401	452	457
Total, worst case		902	2525	358	34	
Sun reduction		0.42	0.44	0.51	0.55	
Oper. time red.		1.00	1.00	1.00	1.00	
Wind dir. red.		0.66	0.65	0.65	0.65	
Total reduction		0.28	0.29	0.33	0.36	
Total, real		249	727	119	12	

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

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

Project:

Baron_SFA

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10/11/2017 10:32 AM / 73

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 991 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (643)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December			
1	05:37	06:02	06:35	07:07	07:27 (T60)	06:43	07:20		
	20:52	20:32	19:46	18:53	83 09:13 (T52)	17:05	16:39		
2	05:37	06:03	06:36	07:08	07:28 (T60)	06:44	07:21		
	20:52	20:31	19:44	18:52	81 09:13 (T52)	17:03	16:39		
3	05:38	06:04	06:37	07:09	07:29 (T60)	06:46	07:22		
	20:52	20:30	19:43	18:50	79 09:13 (T52)	17:02	16:38		
4	05:38	06:05	06:38	07:10	07:31 (T60)	06:47	07:23		
	20:51	20:29	19:41	18:48	74 09:14 (T52)	17:01	16:38		
5	05:39	06:06	06:39	07:11	08:07 (T52)	06:48	07:24		
	20:51	20:28	19:39	18:46	74 17:38 (T47)	17:00	16:38		
6	05:40	06:07	06:40	07:12	08:07 (T52)	06:50	07:25		
	20:51	20:26	19:37	18:45	81 17:41 (T47)	16:59	16:38		
7	05:40	06:08	06:41	07:14	08:07 (T52)	06:51	07:26		
	20:51	20:25	19:36	18:43	84 17:43 (T47)	16:57	16:38		
8	05:41	06:09	06:42	07:15	08:06 (T52)	06:52	07:27		
	20:50	20:24	19:34	18:41	88 17:44 (T47)	16:56	16:38		
9	05:42	06:10	06:43	07:16	08:06 (T52)	06:53	07:28		
	20:50	20:23	19:32	18:40	90 17:45 (T47)	16:55	16:38		
10	05:42	06:11	19:16 (T59)	06:44	18:27 (T44)	07:17	08:06 (T52)	06:55	07:29
	20:50	20:21	8 19:24 (T59)	19:30	8 18:35 (T44)	18:38	91 17:45 (T47)	16:54	16:38
11	05:43	06:12	19:13 (T59)	06:45	18:24 (T44)	07:18	08:07 (T52)	06:56	07:29
	20:49	20:20	13 19:26 (T59)	19:29	13 18:37 (T44)	18:36	92 17:46 (T47)	16:53	16:38
12	05:44	06:14	19:11 (T59)	06:46	18:22 (T44)	07:19	08:07 (T52)	06:57	07:30
	20:49	20:19	17 19:28 (T59)	19:27	17 18:39 (T44)	18:35	92 17:46 (T47)	16:52	16:38
13	05:45	06:15	19:10 (T59)	06:48	18:20 (T44)	07:20	08:07 (T52)	06:58	07:31
	20:48	20:17	19 19:29 (T59)	19:25	20 18:40 (T44)	18:33	91 17:46 (T47)	16:51	16:38
14	05:45	06:16	19:09 (T59)	06:49	07:40 (T60)	07:22	08:07 (T52)	07:00	07:32
	20:48	20:16	21 19:30 (T59)	19:23	31 18:40 (T44)	18:31	91 17:46 (T47)	16:50	16:38
15	05:46	06:17	19:08 (T59)	06:50	07:33 (T60)	07:23	08:08 (T52)	07:01	07:33
	20:47	20:14	22 19:30 (T59)	19:22	59 18:41 (T44)	18:30	88 17:45 (T47)	16:49	16:38
16	05:47	06:18	19:07 (T59)	06:51	07:30 (T60)	07:24	08:09 (T52)	07:02	07:33
	20:46	20:13	23 19:30 (T59)	19:20	71 18:41 (T44)	18:28	88 17:46 (T47)	16:48	16:39
17	05:48	06:19	19:06 (T59)	06:52	07:28 (T60)	07:25	08:10 (T52)	07:03	07:34
	20:46	20:11	25 19:31 (T59)	19:18	79 18:40 (T44)	18:27	84 17:45 (T47)	16:47	16:39
18	05:49	06:20	19:06 (T59)	06:53	07:26 (T60)	07:26	08:10 (T52)	07:05	07:35
	20:45	20:10	25 19:31 (T59)	19:16	88 18:40 (T44)	18:25	82 17:44 (T47)	16:46	16:39
19	05:50	06:21	19:05 (T59)	06:54	07:25 (T60)	07:27	08:11 (T52)	07:06	07:35
	20:44	20:09	25 19:30 (T59)	19:15	92 18:39 (T44)	18:23	78 17:43 (T47)	16:46	16:40
20	05:50	06:22	19:05 (T59)	06:55	07:23 (T60)	07:29	08:13 (T52)	07:07	07:36
	20:44	20:07	25 19:30 (T59)	19:13	98 18:39 (T44)	18:22	73 17:42 (T47)	16:45	16:40
21	05:51	06:23	19:05 (T59)	06:56	07:22 (T60)	07:30	08:14 (T52)	07:08	07:37
	20:43	20:05	25 19:30 (T59)	19:11	101 18:38 (T44)	18:20	68 17:41 (T47)	16:44	16:40
22	05:52	06:24	19:05 (T59)	06:57	07:22 (T60)	07:31	08:15 (T52)	07:09	07:37
	20:42	20:04	24 19:29 (T59)	19:09	103 18:36 (T44)	18:19	62 17:39 (T47)	16:44	16:41
23	05:53	06:25	19:05 (T59)	06:58	07:22 (T60)	07:32	08:17 (T52)	07:11	07:38
	20:41	20:02	23 19:28 (T59)	19:07	103 18:36 (T44)	18:17	55 17:37 (T47)	16:43	16:41
24	05:54	06:26	19:06 (T59)	06:59	07:21 (T60)	07:33	08:19 (T52)	07:12	07:38
	20:40	20:01	21 19:27 (T59)	19:06	103 18:34 (T44)	18:16	44 17:34 (T47)	16:42	16:42
25	05:55	06:27	19:06 (T59)	07:00	07:21 (T60)	07:35	08:21 (T52)	07:13	07:38
	20:39	19:58	20 19:26 (T59)	19:04	100 18:31 (T44)	18:14	30 08:51 (T52)	16:42	16:43
26	05:56	06:28	19:07 (T59)	07:01	07:22 (T60)	07:36	08:24 (T52)	07:14	07:39
	20:39	19:56	17 19:24 (T59)	19:02	89 09:12 (T52)	18:13	23 08:47 (T52)	16:41	16:43
27	05:57	06:30	19:09 (T59)	07:03	07:23 (T60)	07:37	08:30 (T52)	07:15	07:39
	20:38	19:54	13 19:22 (T59)	19:00	88 09:12 (T52)	18:12	13 08:43 (T52)	16:41	16:44
28	05:58	06:31	19:12 (T59)	07:04	07:24 (T60)	07:38		07:16	07:39
	20:37	19:53	6 19:18 (T59)	18:59	87 09:12 (T52)	18:10		16:40	16:45
29	05:59	06:32		07:05	07:25 (T60)	07:40		07:18	07:40
	20:36	19:51		18:57	87 09:13 (T52)	18:09		16:40	16:45
30	06:00	06:33		07:06	07:26 (T60)	07:41		07:19	07:40
	20:35	19:49		18:55	86 09:13 (T52)	18:07		16:39	16:46
31	06:01	06:34				07:42			07:40
	20:33	19:48				18:06			16:47
Potential sun hours	464	431	375	343		294	283		
Total, worst case		372	1523	1979					
Sun reduction		0.91	0.53	0.45					
Oper. time red.		1.00	1.00	1.00					
Wind dir. red.		0.65	0.66	0.66					
Total reduction		0.59	0.35	0.29					
Total, real		221	529	584					

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

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

Printed/Page
10/11/2017 10:32 AM / 74
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2616 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (676)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	09:44 (T93) 07:25	15:23 (T77) 06:47	06:55	06:07	05:37
	16:48	104 16:05 (T77) 17:24	50 16:13 (T77) 18:00	19:36	20:09	20:40
2	07:40	09:45 (T93) 07:24	15:24 (T77) 06:46	06:53	06:06	05:36
	16:49	103 16:06 (T77) 17:25	49 16:13 (T77) 18:01	19:37	20:10	20:41
3	07:40	09:46 (T93) 07:23	15:25 (T77) 06:44	06:51	06:04	05:36
	16:50	102 16:07 (T77) 17:27	47 16:12 (T77) 18:02	19:38	20:11	20:41
4	07:40	09:48 (T93) 07:22	15:26 (T77) 06:43	06:49	06:03	05:35
	16:51	100 16:07 (T77) 17:28	46 16:12 (T77) 18:03	19:39	20:12	20:42
5	07:40	09:49 (T93) 07:21	15:28 (T77) 06:41	06:48	06:02	05:35
	16:52	99 16:08 (T77) 17:29	43 16:11 (T77) 18:05	19:40	20:13	20:43
6	07:40	09:50 (T93) 07:20	15:29 (T77) 06:39	06:46	06:00	05:35
	16:53	98 16:09 (T77) 17:31	40 16:09 (T77) 18:06	19:42	20:14	20:44
7	07:40	09:52 (T93) 07:19	15:30 (T77) 06:38	06:44	05:59	05:34
	16:54	95 16:09 (T77) 17:32	38 16:08 (T77) 18:07	19:43	20:15	20:44
8	07:40	09:54 (T93) 07:17	15:33 (T77) 07:36	06:43	05:58	05:34
	16:55	93 16:10 (T77) 17:33	34 16:07 (T77) 19:08	19:44	20:16	20:45
9	07:40	09:55 (T93) 07:16	15:35 (T77) 07:34	06:41	05:57	05:34
	16:56	90 16:10 (T77) 17:34	30 16:05 (T77) 19:09	19:45	20:17	20:46
10	07:40	09:57 (T93) 07:15	15:37 (T77) 07:33	06:39	05:56	05:34
	16:57	88 16:11 (T77) 17:36	25 16:02 (T77) 19:11	19:46	20:19	20:46
11	07:39	09:59 (T93) 07:14	15:41 (T77) 07:31	06:38	05:54	05:33
	16:58	85 16:12 (T77) 17:37	18 15:59 (T77) 19:12	19:47	20:20	20:47
12	07:39	10:01 (T93) 07:12	15:48 (T77) 07:29	06:36	05:53	05:33
	16:59	79 16:11 (T77) 17:38	5 15:53 (T77) 19:13	19:48	20:21	20:47
13	07:39	10:06 (T93) 07:11	07:28	06:34	05:52	05:33
	17:00	72 16:12 (T77) 17:40	19:14	19:49	20:22	20:48
14	07:38	15:13 (T77) 07:10	07:26	06:33	05:51	05:33
	17:01	60 16:13 (T77) 17:41	19:15	19:51	20:23	20:48
15	07:38	15:13 (T77) 07:08	07:24	06:31	05:50	05:33
	17:03	60 16:13 (T77) 17:42	19:17	19:52	20:24	20:49
16	07:38	15:13 (T77) 07:07	07:22	06:29	05:49	05:33
	17:04	60 16:13 (T77) 17:44	19:18	19:53	20:25	20:49
17	07:37	15:14 (T77) 07:06	07:21	06:28	05:48	05:33
	17:05	60 16:14 (T77) 17:45	19:19	19:54	20:26	20:50
18	07:36	15:14 (T77) 07:04	07:19	06:26	05:47	05:33
	17:06	60 16:14 (T77) 17:46	19:20	19:55	20:27	20:50
19	07:36	15:15 (T77) 07:03	07:17	06:25	05:46	05:33
	17:07	60 16:15 (T77) 17:47	19:21	19:56	20:28	20:50
20	07:35	15:15 (T77) 07:01	07:15	06:23	05:45	05:33
	17:09	60 16:15 (T77) 17:49	19:22	19:57	20:29	20:51
21	07:35	15:15 (T77) 07:00	07:14	06:22	05:44	05:34
	17:10	60 16:15 (T77) 17:50	19:23	19:58	20:30	20:51
22	07:34	15:15 (T77) 06:58	07:12	06:20	05:43	05:34
	17:11	60 16:15 (T77) 17:51	19:25	20:00	20:31	20:51
23	07:33	15:17 (T77) 06:57	07:10	06:19	05:43	05:34
	17:12	59 16:16 (T77) 17:52	19:26	20:00	20:32	20:51
24	07:32	15:17 (T77) 06:55	07:08	06:17	05:42	05:34
	17:14	58 16:15 (T77) 17:54	19:27	20:01	20:33	20:52
25	07:32	15:17 (T77) 06:54	07:07	06:16	05:41	05:35
	17:15	58 16:15 (T77) 17:55	19:28	20:02	20:34	20:52
26	07:31	15:18 (T77) 06:52	07:05	06:14	05:40	05:35
	17:16	57 16:15 (T77) 17:56	19:29	20:03	20:35	20:52
27	07:30	15:18 (T77) 06:51	07:03	06:13	05:40	05:35
	17:17	57 16:15 (T77) 17:57	19:30	20:04	20:36	20:52
28	07:29	15:19 (T77) 06:49	07:02	06:11	05:39	05:36
	17:19	56 16:15 (T77) 17:59	19:31	20:05	20:37	20:52
29	07:28	15:20 (T77)	07:00	06:10	05:38	05:36
	17:20	54 16:14 (T77)	19:33	20:06	20:37	20:52
30	07:27	15:21 (T77)	06:58	06:08	05:38	05:37
	17:21	53 16:14 (T77)	19:34	20:07	20:38	20:52
31	07:26	15:22 (T77)	06:56		05:37	05:37
	17:23	52 16:14 (T77)	19:35		20:39	20:52
Potential sun hours	294	295	370	401	452	457
Total, worst case	2252	425			336	810
Sun reduction	0.39	0.42			0.55	0.59
Oper. time red.	1.00	1.00			1.00	1.00
Wind dir. red.	0.67	0.69			0.64	0.64
Total reduction	0.26	0.29			0.35	0.38
Total, real	589	123			118	305

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

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

Project:

Baron_SFA

Printed/Page

10/11/2017 10:32 AM / 75

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2616 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (676)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum

210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760

Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37	19:54 (T65)	06:02	06:35	07:07	06:43
	20:52	20:21 (T65)	20:32	19:46	18:54	17:05
2	05:38	19:55 (T65)	06:03	06:36	07:08	06:45
	20:52	20:22 (T65)	20:31	19:44	18:52	17:04
3	05:38	19:54 (T65)	06:04	06:37	07:09	06:46
	20:52	20:22 (T65)	20:30	19:43	18:50	17:02
4	05:39	19:55 (T65)	06:05	06:38	07:10	06:47
	20:51	20:22 (T65)	20:29	19:41	18:48	17:01
5	05:39	19:55 (T65)	06:06	06:39	07:11	06:48
	20:51	20:23 (T65)	20:28	19:39	18:47	17:00
6	05:40	19:54 (T65)	06:08	06:40	07:13	06:50
	20:51	20:23 (T65)	20:27	19:38	18:45	16:59
7	05:41	19:55 (T65)	06:09	06:41	07:14	06:51
	20:51	20:24 (T65)	20:25	19:36	18:43	16:58
8	05:41	19:54 (T65)	06:10	06:42	07:15	06:52
	20:50	20:23 (T65)	20:24	19:34	18:42	16:57
9	05:42	19:55 (T65)	06:11	06:44	07:16	06:53
	20:50	20:24 (T65)	20:23	19:32	18:40	16:55
10	05:43	19:55 (T65)	06:12	06:45	07:17	06:55
	20:50	20:24 (T65)	20:21	19:31	18:38	16:54
11	05:43	19:54 (T65)	06:13	06:46	07:18	06:56
	20:49	20:23 (T65)	20:20	19:29	18:37	16:53
12	05:44	19:55 (T65)	06:14	06:47	07:19	06:57
	20:49	20:22 (T65)	20:19	19:27	18:35	16:52
13	05:45	19:55 (T65)	06:15	06:48	07:21	06:58
	20:48	20:22 (T65)	20:17	19:25	18:33	16:51
14	05:46	19:56 (T65)	06:16	06:49	07:22	07:00
	20:48	20:22 (T65)	20:16	19:24	18:32	16:50
15	05:47	19:56 (T65)	06:17	06:50	07:23	07:01
	20:47	20:22 (T65)	20:14	19:22	18:30	16:49
16	05:47	19:55 (T65)	06:18	06:51	07:24	07:02
	20:46	20:20 (T65)	20:13	19:20	18:28	16:48
17	05:48	19:56 (T65)	06:19	06:52	07:25	07:03
	20:46	20:20 (T65)	20:12	19:18	18:27	16:48
18	05:49	19:56 (T65)	06:20	06:53	07:26	07:05
	20:45	20:19 (T65)	20:10	19:16	18:25	16:47
19	05:50	19:57 (T65)	06:21	06:54	07:28	07:06
	20:44	20:19 (T65)	20:09	19:15	18:24	16:46
20	05:51	19:57 (T65)	06:22	06:55	07:29	07:07
	20:44	20:18 (T65)	20:07	19:13	18:22	16:45
21	05:52	19:58 (T65)	06:23	06:56	07:30	07:08
	20:43	20:18 (T65)	20:06	19:11	18:21	16:45
22	05:53	19:57 (T65)	06:24	06:57	07:31	07:09
	20:42	20:16 (T65)	20:04	19:09	18:19	16:44
23	05:54	19:58 (T65)	06:26	06:58	07:32	07:11
	20:41	20:15 (T65)	20:02	19:08	18:18	16:43
24	05:54	19:58 (T65)	06:27	06:59	07:33	07:12
	20:40	20:15 (T65)	20:01	19:06	18:16	16:43
25	05:55	19:59 (T65)	06:28	07:01	07:35	07:13
	20:39	20:14 (T65)	19:58	19:04	18:15	16:42
26	05:56	20:00 (T65)	06:29	07:02	07:36	07:14
	20:39	20:13 (T65)	19:56	19:02	18:13	16:41
27	05:57	20:01 (T65)	06:30	07:03	07:37	07:15
	20:38	20:12 (T65)	19:54	19:01	18:12	16:41
28	05:58	20:03 (T65)	06:31	07:04	07:38	07:16
	20:37	20:11 (T65)	19:53	18:59	18:10	16:40
29	05:59	20:04 (T65)	06:32	07:05	07:40	07:18
	20:36	20:10 (T65)	19:51	18:57	18:09	16:40
30	06:00	20:07 (T65)	06:33	07:06	07:41	07:19
	20:35	20:09 (T65)	19:49	18:55	18:08	16:40
31	06:01		06:34		07:42	07:40
	20:33		19:48		18:06	16:47
Potential sun hours	463	431	375	343	294	283
Total, worst case	660			29	1604	3171
Sun reduction	0.64			0.45	0.29	0.28
Oper. time red.	1.00			1.00	1.00	1.00
Wind dir. red.	0.64			0.69	0.69	0.64
Total reduction	0.41			0.31	0.20	0.18
Total, real	269			9	320	574

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

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

Baron_SFA

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10/11/2017 10:32 AM / 76

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2620 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (677)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	08:08 (T92) 07:25	07:49 (T73) 06:48	06:55	07:17 (T77) 06:07	05:37
2	16:48 38	10:06 (T85) 17:24	16:58 (T63) 18:00	19:36	08:05 (T77) 20:09	20:40
3	16:49 35	08:08 (T92) 07:24	07:49 (T73) 06:46	06:53	07:16 (T77) 06:06	05:36
4	16:50 30	10:05 (T85) 17:25	16:58 (T63) 18:01	19:37	08:05 (T77) 20:10	20:41
5	16:51 20	08:08 (T92) 07:23	07:50 (T73) 06:44	06:51	07:16 (T77) 06:04	05:36
6	16:52 19	10:02 (T85) 17:27	16:58 (T63) 18:02	19:38	08:06 (T77) 20:11	20:42
7	16:53 18	08:09 (T92) 07:22	07:50 (T73) 06:43	06:50	07:15 (T77) 06:03	05:35
8	16:54 17	10:02 (T85) 17:28	16:57 (T63) 18:04	19:39	08:06 (T77) 20:12	20:42
9	16:55 16	08:29 (T92) 07:21	07:50 (T73) 06:41	06:48	07:14 (T77) 06:02	05:35
10	16:56 14	10:02 (T85) 17:29	16:57 (T63) 18:05	19:40	08:05 (T77) 20:13	20:43
11	16:57 11	08:11 (T92) 07:20	07:51 (T73) 06:39	06:46	07:13 (T77) 06:00	05:35
12	16:58 9	10:02 (T85) 17:31	16:56 (T63) 18:06	19:42	08:05 (T77) 20:14	20:44
13	17:00 1	08:12 (T92) 07:19	07:50 (T73) 06:38	06:44	07:13 (T77) 05:59	05:34
14	17:02 3	10:02 (T85) 17:32	16:54 (T63) 18:07	19:43	08:06 (T77) 20:15	20:44
15	17:03 5	08:29 (T92) 07:18	07:51 (T73) 07:36	06:43	07:12 (T77) 05:58	05:34
16	17:05 7	10:02 (T85) 17:33	16:52 (T63) 18:08	19:44	08:05 (T77) 20:16	20:45
17	17:07 9	08:14 (T92) 07:16	07:51 (T73) 07:34	06:41	07:12 (T77) 05:57	05:34
18	17:09 11	10:02 (T85) 17:34	16:49 (T63) 18:10	19:45	08:04 (T77) 20:17	20:46
19	17:11 13	08:16 (T92) 07:15	07:51 (T73) 07:33	06:39	07:12 (T77) 05:56	05:34
20	17:13 15	10:02 (T85) 17:35	16:48 (T63) 18:11	19:46	08:05 (T77) 20:19	20:46
21	17:15 17	08:27 (T92) 07:14	07:52 (T73) 07:31	06:38	07:12 (T77) 05:54	05:34
22	17:17 19	10:02 (T85) 17:36	16:47 (T63) 18:12	19:47	08:04 (T77) 20:20	20:47
23	17:19 21	08:20 (T92) 07:13	07:54 (T73) 07:29	06:36	07:11 (T77) 05:53	05:33
24	17:21 23	10:02 (T85) 17:37	16:46 (T63) 18:13	19:48	08:03 (T77) 20:21	20:47
25	17:23 25	08:24 (T92) 07:11	07:54 (T73) 07:28	06:34	07:12 (T77) 05:52	05:33
26	17:25 27	10:02 (T85) 17:38	16:45 (T63) 18:14	19:50	08:03 (T77) 20:22	20:48
27	17:27 29	08:28 (T92) 07:10	07:56 (T73) 07:26	06:33	07:12 (T77) 05:51	05:33
28	17:29 31	10:02 (T85) 17:39	16:44 (T63) 18:15	19:51	08:02 (T77) 20:23	20:48
29	17:31 1	08:31 (T92) 07:08	07:58 (T73) 07:24	06:31	07:12 (T77) 05:50	05:33
30	17:33 3	10:02 (T85) 17:40	16:43 (T63) 18:16	19:52	08:01 (T77) 20:24	20:49
31	17:35 5	08:36 (T92) 07:07	08:00 (T73) 07:22	06:30	07:12 (T77) 05:49	05:33
Potential sun hours	294	295	370	401	452	457
Total, worst case	850	693	360	1178		
Sun reduction	0.39	0.42	0.44	0.51		
Oper. time red.	1.00	1.00	1.00	1.00		
Wind dir. red.	0.65	0.64	0.67	0.68		
Total reduction	0.25	0.27	0.29	0.34		
Total, real	212	185	106	402		

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

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

Project:

Baron_SFA

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Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2620 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (677)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
120 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37 06:02		06:35	07:11 (T77) 07:07	06:43	07:21 (T73) 07:20
	20:52 20:32		19:46	08:03 (T77) 18:54	17:05	07:53 (T73) 16:39
2	05:38 06:03		06:36	07:10 (T77) 07:08	06:45	07:21 (T73) 07:21
	20:52 20:31		19:44	08:03 (T77) 18:52	17:04	16:20 (T63) 16:39
3	05:38 06:04		06:37	07:10 (T77) 07:09	06:46	07:20 (T73) 07:22
	20:52 20:30		19:43	08:02 (T77) 18:50	17:03	16:22 (T63) 16:39
4	05:39 06:06		06:38	07:09 (T77) 07:10	06:47	07:20 (T73) 07:23
	20:51 20:29		19:41	08:02 (T77) 18:48	17:01	16:24 (T63) 16:39
5	05:39 06:07		06:39	07:09 (T77) 07:12	06:48	07:20 (T73) 07:24
	20:51 20:28		19:39	08:02 (T77) 18:47	17:00	16:26 (T63) 16:38
6	05:40 06:08		06:40	07:09 (T77) 07:13	06:50	07:20 (T73) 07:25
	20:51 20:27		19:38	08:01 (T77) 18:45	16:59	16:27 (T63) 16:38
7	05:41 06:09		06:41	07:09 (T77) 07:14	06:51	07:20 (T73) 07:26
	20:51 20:25		19:36	08:00 (T77) 18:43	16:58	16:27 (T63) 16:38
8	05:41 06:10		06:43	07:09 (T77) 07:15	06:52	07:20 (T73) 07:27
	20:50 20:24		19:34	08:00 (T77) 18:42	16:57	16:29 (T63) 16:38
9	05:42 06:11		06:44	07:09 (T77) 07:16	06:53	07:20 (T73) 07:28
	20:50 20:23		19:32	07:59 (T77) 18:40	16:55	16:29 (T63) 16:38
10	05:43 06:12		06:45	07:09 (T77) 07:17	06:55	07:20 (T73) 07:29
	20:50 20:21		19:31	07:58 (T77) 18:38	16:54	16:29 (T63) 16:38
11	05:43 06:13		06:46	07:09 (T77) 07:18	06:56	07:21 (T73) 07:30
	20:49 20:20		19:29	07:57 (T77) 18:37	16:53	16:29 (T63) 16:38
12	05:44 06:14		06:47	07:10 (T77) 07:19	06:57	07:22 (T73) 07:30
	20:49 20:19		19:27	07:56 (T77) 18:35	16:52	16:28 (T63) 16:38
13	05:45 06:15		06:48	07:10 (T77) 07:21	06:58	07:22 (T73) 07:31
	20:48 20:17		19:25	07:54 (T77) 18:33	16:51	16:27 (T63) 16:38
14	05:46 06:16		06:49	07:09 (T93) 07:22	07:00	07:23 (T73) 07:32
	20:48 20:16		19:24	07:53 (T77) 18:32	16:50	16:26 (T63) 16:38
15	05:47 06:17		06:50	07:10 (T93) 07:23	07:01	07:24 (T73) 07:33
	20:47 20:14		19:22	07:51 (T77) 18:30	16:49	16:25 (T63) 16:39
16	05:47 06:18	07:34 (T77)	06:51	07:11 (T93) 07:24	07:02	07:25 (T73) 07:33
	20:46 20:13	13	19:20	07:49 (T77) 18:28	16:49	16:24 (T63) 16:39
17	05:48 06:19	07:30 (T77)	06:52	07:12 (T93) 07:25	07:03	07:27 (T73) 07:34
	20:46 20:12	20	19:18	07:47 (T77) 18:27	16:48	16:23 (T63) 16:39
18	05:49 06:20	07:27 (T77)	06:53	07:13 (T93) 07:26	07:05	07:28 (T73) 07:35
	20:45 20:10	26	19:17	07:45 (T77) 18:25	16:47	16:22 (T63) 16:40
19	05:50 06:21	07:25 (T77)	06:54	07:15 (T93) 07:28	07:06	07:29 (T73) 07:35
	20:44 20:09	30	19:15	07:42 (T77) 18:24	16:46	16:21 (T63) 16:40
20	05:51 06:22	07:23 (T77)	06:55	07:16 (T93) 07:29	07:07	07:30 (T73) 07:36
	20:44 20:07	33	19:13	07:38 (T77) 18:22	16:45	16:20 (T63) 16:40
21	05:52 06:23	07:21 (T77)	06:56	07:17 (T93) 07:30	07:08	07:32 (T73) 07:37
	20:43 20:06	36	19:11	07:31 (T93) 18:21	16:45	16:20 (T63) 16:41
22	05:53 06:24	07:20 (T77)	06:57	07:18 (T93) 07:31	07:09	07:34 (T73) 07:37
	20:42 20:04	39	19:09	07:29 (T93) 18:19	16:44	16:19 (T63) 16:41
23	05:54 06:25	07:18 (T77)	06:58	07:19 (T93) 07:32	07:11	07:38 (T73) 07:38
	20:41 20:02	41	19:08	07:28 (T93) 18:18	16:43	16:18 (T63) 16:42
24	05:55 06:27	07:17 (T77)	06:59	07:20 (T93) 07:34	07:12	16:07 (T63) 07:38
	20:40 20:01	43	19:06	07:25 (T93) 18:16	16:43	16:18 (T63) 16:42
25	05:55 06:28	07:16 (T77)	07:01	07:35	07:13	16:08 (T63) 07:38
	20:40 19:58	45	19:04	18:15	11	08:43 (T73) 16:42
26	05:56 06:29	07:15 (T77)	07:02	07:36	07:14	16:09 (T63) 07:39
	20:39 19:56	46	19:02	18:13	17	08:46 (T73) 16:41
27	05:57 06:30	07:14 (T77)	07:03	07:37	07:15	16:10 (T63) 07:39
	20:38 19:54	48	19:01	18:12	21	08:48 (T73) 16:41
28	05:58 06:31	07:13 (T77)	07:04	07:38	07:16	16:12 (T63) 07:39
	20:37 19:53	49	18:59	18:10	25	08:50 (T73) 16:41
29	05:59 06:32	07:12 (T77)	07:05	07:40	07:18	16:14 (T63) 07:40
	20:36 19:51	50	18:57	18:09	27	08:51 (T73) 16:40
30	06:00 06:33	07:12 (T77)	07:06	07:41	07:19	16:16 (T63) 07:40
	20:35 19:50	51	18:55	18:08	29	08:52 (T73) 16:40
31	06:01 06:34	07:11 (T77)		07:42		08:02 (T92) 07:40
	20:34 19:48	52	08:03 (T77)	18:06	31	08:53 (T73) 16:47
Potential sun hours	463	431	375	343	294	283
Total, worst case		622	932	161	1168	1194
Sun reduction		0.91	0.53	0.45	0.29	0.28
Oper. time red.		1.00	1.00	1.00	1.00	1.00
Wind dir. red.		0.68	0.67	0.62	0.65	0.60
Total reduction		0.61	0.35	0.28	0.19	0.17
Total, real		378	330	45	219	200

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

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

Baron_SFA

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10/11/2017 10:32 AM / 78

Licensed user:

EDR

217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2627 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (679)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June		
1	07:40	14:31 (T63) 07:25	07:48 (T82) 06:48	07:12 (T85) 06:55	06:07	05:37		
16:48	72 15:43 (T63) 17:24	78 15:43 (T63) 17:24	33 07:45 (T85) 18:00	07:45 (T85) 19:36	20:09	20:40		
2	07:40	14:32 (T63) 07:24	07:48 (T82) 06:46	07:13 (T85) 06:53	06:06	05:36		
16:49	72 15:44 (T63) 17:25	76 15:42 (T63) 18:01	32 07:45 (T85) 19:37	07:45 (T85) 19:37	20:10	20:41		
3	07:40	14:32 (T63) 07:23	07:48 (T82) 06:44	07:12 (T85) 06:51	06:04	05:36		
16:50	72 15:44 (T63) 17:27	73 15:41 (T63) 18:02	33 07:45 (T85) 19:38	07:45 (T85) 19:38	20:11	20:42		
4	07:40	14:32 (T63) 07:22	07:48 (T82) 06:43	07:11 (T85) 06:50	06:03	05:35		
16:51	72 15:44 (T63) 17:28	69 15:39 (T63) 18:04	33 07:44 (T85) 19:39	07:44 (T85) 19:39	20:12	20:42		
5	07:40	14:32 (T63) 07:21	07:49 (T82) 06:41	07:12 (T85) 06:48	06:02	05:35		
16:52	72 15:44 (T63) 17:29	65 15:38 (T63) 18:05	33 07:45 (T85) 19:41	07:45 (T85) 19:41	20:13	20:43		
6	07:40	14:33 (T63) 07:20	07:49 (T82) 06:39	07:12 (T85) 06:46	06:00	05:35		
16:53	72 15:45 (T63) 17:31	60 15:36 (T63) 18:06	32 07:44 (T85) 19:42	07:44 (T85) 19:42	20:14	20:44		
7	07:40	14:33 (T63) 07:19	07:49 (T82) 06:38	07:11 (T85) 06:44	05:59	05:34		
16:54	72 15:45 (T63) 17:32	54 15:33 (T63) 18:07	32 07:43 (T85) 19:43	07:43 (T85) 19:43	20:15	20:44		
8	07:40	14:34 (T63) 07:18	07:50 (T82) 07:36	08:12 (T85) 06:43	06:58	05:34		
16:55	72 15:46 (T63) 17:33	45 15:29 (T63) 19:08	31 08:43 (T85) 19:44	08:43 (T85) 19:44	20:16	20:45		
9	07:40	14:35 (T63) 07:16	07:51 (T82) 07:34	08:13 (T85) 06:41	05:57	05:34		
16:56	71 15:46 (T63) 17:35	25 08:16 (T82) 19:10	28 08:41 (T85) 19:45	08:41 (T85) 19:45	20:18	20:46		
10	07:40	14:35 (T63) 07:15	07:52 (T82) 07:33	08:13 (T85) 06:39	06:59 (T77) 05:56	05:34		
16:57	71 15:46 (T63) 17:36	24 08:16 (T82) 19:11	27 08:40 (T85) 19:46	8 07:07 (T77) 20:19	20:46	20:46		
11	07:39	14:36 (T63) 07:14	07:52 (T82) 07:31	08:15 (T85) 06:38	06:57 (T77) 05:54	05:34	05:34	
16:58	71 15:47 (T63) 17:37	22 08:14 (T82) 19:12	24 08:39 (T85) 19:47	12 07:09 (T77) 20:20	20:47	20:47		
12	07:39	14:36 (T63) 07:13	07:54 (T82) 07:29	08:16 (T85) 06:36	06:55 (T77) 05:53	05:33	05:33	
16:59	70 15:46 (T63) 17:38	19 08:13 (T82) 19:13	21 08:37 (T85) 19:48	15 07:10 (T77) 20:21	20:47	20:47		
13	07:39	14:37 (T63) 07:11	07:56 (T82) 07:28	08:18 (T85) 06:34	06:54 (T77) 05:52	05:33	05:33	
17:00	70 15:47 (T63) 17:40	16 08:12 (T82) 19:14	16 08:34 (T85) 19:50	18 07:12 (T77) 20:22	20:48	20:48		
14	07:38	14:38 (T63) 07:10	07:58 (T82) 07:26	08:21 (T85) 06:33	06:52 (T77) 05:51	05:33	05:33	
17:02	70 15:48 (T63) 17:41	11 08:09 (T82) 19:15	8 08:29 (T85) 19:51	20 07:12 (T77) 20:23	20:48	20:48		
15	07:38	14:38 (T63) 07:09	07:24	06:31	06:51 (T77) 05:50	05:33	05:33	
17:03	69 15:47 (T63) 17:42	19:17	19:52	22 07:13 (T77) 20:24	20:49	20:49		
16	07:38	14:39 (T63) 07:07	07:22	06:30	06:49 (T77) 05:49	05:33	05:33	
17:04	69 15:48 (T63) 17:44	19:18	19:53	24 07:13 (T77) 20:25	20:49	20:49		
17	07:37	14:39 (T63) 07:06	07:21	06:28	06:47 (T77) 05:48	05:33	05:33	
17:05	69 15:48 (T63) 17:45	19:19	19:54	25 07:12 (T77) 20:26	20:50	20:50		
18	07:37	14:39 (T63) 07:04	07:19	06:26	06:47 (T77) 05:47	05:33	05:33	
17:06	69 15:48 (T63) 17:46	19:20	19:55	26 07:13 (T77) 20:27	20:50	20:50		
19	07:36	14:41 (T63) 07:03	07:17	06:25	06:47 (T77) 05:46	05:33	05:33	
17:07	67 15:48 (T63) 17:47	19:21	19:56	25 07:12 (T77) 20:28	20:50	20:50		
20	07:35	14:41 (T63) 07:01	07:16	06:23	06:47 (T77) 05:45	05:34	05:34	
17:09	67 15:48 (T63) 17:49	19:22	19:57	25 07:12 (T77) 20:29	20:51	20:51		
21	07:35	14:41 (T63) 07:00	07:26 (T85) 07:14	06:22	06:47 (T77) 05:44	05:34	05:34	
17:10	67 15:48 (T63) 17:50	8 07:34 (T85) 19:24	19:59	24 07:11 (T77) 20:30	20:51	20:51		
22	07:34	07:58 (T82) 06:58	07:22 (T85) 07:12	06:20	06:48 (T77) 05:44	05:34	05:34	
17:11	70 15:48 (T63) 17:51	15 07:37 (T85) 19:25	20:00	22 07:10 (T77) 20:31	20:51	20:51		
23	07:33	07:55 (T82) 06:57	07:20 (T85) 07:10	06:19	06:48 (T77) 05:43	05:34	05:34	
17:12	75 15:48 (T63) 17:52	20 07:40 (T85) 19:26	20:00	21 07:09 (T77) 20:32	20:51	20:51		
24	07:33	07:54 (T82) 06:55	07:17 (T85) 07:09	06:17	06:49 (T77) 05:42	05:34	05:34	
17:14	78 15:48 (T63) 17:54	24 07:41 (T85) 19:27	20:01	19 07:08 (T77) 20:33	20:52	20:52		
25	07:32	07:53 (T82) 06:54	07:17 (T85) 07:07	06:16	06:50 (T77) 05:41	05:35	05:35	
17:15	79 15:47 (T63) 17:55	26 07:43 (T85) 19:28	20:02	16 07:06 (T77) 20:34	20:52	20:52		
26	07:31	07:52 (T82) 06:52	07:15 (T85) 07:05	06:14	06:52 (T77) 05:40	05:35	05:35	
17:16	80 15:47 (T63) 17:56	28 07:43 (T85) 19:29	20:03	12 07:04 (T77) 20:35	20:52	20:52		
27	07:30	07:51 (T82) 06:51	07:15 (T85) 07:03	06:13	06:55 (T77) 05:40	05:35	05:35	
17:18	80 15:46 (T63) 17:57	30 07:45 (T85) 19:30	20:04	6 07:01 (T77) 20:36	20:52	20:52		
28	07:29	07:50 (T82) 06:49	07:13 (T85) 07:02	06:11	05:39	05:36	05:36	
17:19	81 15:46 (T63) 17:59	32 07:45 (T85) 19:31	20:05	20:37	20:52	20:52		
29	07:28	07:49 (T82) 06:48	07:00	06:10	05:39	05:36	05:36	
17:20	81 15:45 (T63) 17:58	19:33	20:06	20:37	20:52	20:52	20:52	
30	07:27	07:48 (T82) 06:47	06:58	06:08	05:38	05:37	05:37	
17:21	81 15:44 (T63) 17:57	19:34	20:08	20:38	20:52	20:52	20:52	
31	07:26	07:48 (T82) 06:46	06:56	06:07	05:37	05:36	05:36	
17:23	80 15:44 (T63) 17:56	19:35	20:09	20:39	20:52	20:52	20:52	
Potential sun hours	294	295	370	401	452	457	457	457
Total, worst case	2261	820	383	340	340	340	340	340
Sun reduction	0.39	0.42	0.44	0.51	0.51	0.51	0.51	0.51
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.67	0.65	0.65	0.68	0.68	0.68	0.68	0.68
Total reduction	0.26	0.27	0.29	0.35	0.35	0.35	0.35	0.35
Total, real	594	224	110	118	118	118	118	118

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

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

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Licensed user: EDR 217 Montgomery St. US-SYRACUSE, NY 13202 (315) 471 0688

Calculated: 10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2627 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (679)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 1 row of values: 0.39, 0.42, 0.44, 0.51, 0.55, 0.59, 0.64, 0.91, 0.53, 0.45, 0.29, 0.28

Assumptions for shadow calculations

Operational time

Table with 16 columns (N-Sum) and 1 row of values: 210, 144, 244, 226, 221, 198, 388, 456, 848, 816, 949, 930, 1,255, 1,162, 542, 171, 8,760

Main shadow calculation table with columns for months (July-December) and rows for each day (1-31) showing sun rise/set times and shadow reduction factors.

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

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

Project:
Baron_SFA

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10/11/2017 10:32 AM / 80

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2629 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (680)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	07:40 16:48	58 14:59 (T63) 07:25 15:57 (T63) 17:24	64 08:06 (T82) 06:48 15:57 (T63) 18:00	33 07:29 (T85) 06:55 08:02 (T85) 19:36		06:07 20:09	
2	07:40 16:49	59 14:59 (T63) 07:24 15:58 (T63) 17:25	59 08:07 (T82) 06:46 15:56 (T63) 18:01	31 07:30 (T85) 06:53 08:01 (T85) 19:37		06:06 20:10	
3	07:40 16:50	59 14:59 (T63) 07:23 15:58 (T63) 17:27	54 08:09 (T82) 06:44 15:55 (T63) 18:02	30 07:30 (T85) 06:51 08:00 (T85) 19:38		06:04 20:11	
4	07:40 16:51	65 08:07 (T82) 07:22 15:58 (T63) 17:28	46 08:10 (T82) 06:43 15:53 (T63) 18:04	27 07:31 (T85) 06:50 07:58 (T85) 19:39		06:03 20:12	
5	07:40 16:52	68 08:06 (T82) 07:21 15:58 (T63) 17:29	38 08:12 (T82) 06:41 15:51 (T63) 18:05	24 07:33 (T85) 06:48 07:57 (T85) 19:41		06:02 20:13	
6	07:40 16:53	71 08:05 (T82) 07:20 15:59 (T63) 17:31	24 08:15 (T82) 06:39 15:47 (T63) 18:06	20 07:34 (T85) 06:46 07:54 (T85) 19:42		06:00 20:14	
7	07:40 16:54	72 08:05 (T82) 07:19 15:59 (T63) 17:32		14 07:37 (T85) 06:44 07:51 (T85) 19:43		07:06 (T77) 05:59 20:15	
8	07:40 16:55	76 08:04 (T82) 07:18 16:00 (T63) 17:33					07:02 (T77) 05:58 20:16
9	07:40 16:56	77 08:04 (T82) 07:16 16:01 (T63) 17:35					07:00 (T77) 05:57 20:18
10	07:40 16:57	78 16:01 (T63) 17:35 08:03 (T82) 07:15					18 07:18 (T77) 20:18 06:59 (T77) 05:56
11	07:39 16:58	79 08:03 (T82) 07:14 16:01 (T63) 17:37					20 07:19 (T77) 20:19 06:57 (T77) 05:54
12	07:39 16:59	82 08:02 (T82) 07:13 16:01 (T63) 17:38					23 07:20 (T77) 20:20 06:55 (T77) 05:53
13	07:39 17:00	83 08:02 (T82) 07:11 16:02 (T63) 17:40					25 07:20 (T77) 20:21 06:55 (T77) 05:52
14	07:38 17:02	84 08:02 (T82) 07:10 16:02 (T63) 17:41					26 07:21 (T77) 20:22 06:54 (T77) 05:51
15	07:38 17:03	84 08:02 (T82) 07:09 16:02 (T63) 17:42					27 07:21 (T77) 20:23 06:54 (T77) 05:50
16	07:38 17:04	85 08:02 (T82) 07:07 16:03 (T63) 17:44					27 07:21 (T77) 20:24 06:53 (T77) 05:49
17	07:37 17:05	86 08:02 (T82) 07:06 16:03 (T63) 17:45					28 07:21 (T77) 20:25 06:52 (T77) 05:48
18	07:37 17:06	86 08:01 (T82) 07:04 16:03 (T63) 17:46					28 07:20 (T77) 20:26 06:53 (T77) 05:47
19	07:36 17:07	85 08:02 (T82) 07:03 16:02 (T63) 17:47					27 07:20 (T77) 20:27 06:53 (T77) 05:46
20	07:35 17:09	86 08:02 (T82) 07:01 16:03 (T63) 17:49					26 07:19 (T77) 20:28 06:53 (T77) 05:45
21	07:35 17:10	86 08:01 (T82) 07:00 16:03 (T63) 17:50					25 07:18 (T77) 20:29 06:53 (T77) 05:44
22	07:34 17:11	86 08:02 (T82) 06:58 16:03 (T63) 17:51					24 07:17 (T77) 20:30 06:55 (T77) 05:44
23	07:33 17:12	84 08:02 (T82) 06:57 16:03 (T63) 17:52					21 07:16 (T77) 20:31 06:55 (T77) 05:43
24	07:33 17:14	83 08:02 (T82) 06:55 16:02 (T63) 17:54					19 07:14 (T77) 20:32 06:57 (T77) 05:42
25	07:32 17:15	82 08:02 (T82) 06:54 16:02 (T63) 17:55					16 07:13 (T77) 20:33 06:58 (T77) 05:41
26	07:31 17:16	81 08:03 (T82) 06:52 16:02 (T63) 17:56					12 07:10 (T77) 20:34 07:04 (T77) 05:40
27	07:30 17:18	78 08:03 (T82) 06:51 16:01 (T63) 17:57					1 07:05 (T77) 20:35 05:40 20:35
28	07:29 17:19	76 08:03 (T82) 06:49 16:00 (T63) 17:59					06:13 05:40 20:04 20:36
29	07:28 17:20	74 08:04 (T82) 06:48 16:00 (T63) 17:59					06:13 05:39 20:06 20:37
30	07:27 17:21	72 08:04 (T82) 06:47 15:59 (T63) 17:59					06:13 05:39 20:06 20:37
31	07:26 17:23	68 08:05 (T82) 06:46 15:58 (T63) 17:59					06:08 05:38 20:08 20:38
Potential sun hours	294	295	370	401	452	457	
Total, worst case	2391	805	179	414			
Sun reduction	0.39	0.42	0.44	0.51			
Oper. time red.	1.00	1.00	1.00	1.00			
Wind dir. red.	0.66	0.65	0.64	0.68			
Total reduction	0.26	0.27	0.28	0.35			
Total, real	620	219	51	143			

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

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

Baron_SFA

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Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2629 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (680)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37 06:02		06:35	06:56 (T77) 07:07	06:43	07:20
	20:52 20:32		19:46	07:19 (T77) 18:54	17:05	16:39
2	05:38 06:03		06:36	06:57 (T77) 07:08	06:45	07:21
	20:52 20:31		19:44	07:17 (T77) 18:52	17:04	16:39
3	05:38 06:05		06:37	06:58 (T77) 07:09	06:46	07:22
	20:52 20:30		19:43	07:16 (T77) 18:50	17:03	16:39
4	05:39 06:06		06:38	06:59 (T77) 07:10	06:47	07:23
	20:51 20:29		19:41	07:13 (T77) 18:48	17:01	16:39
5	05:39 06:07		06:39	07:02 (T77) 07:12	06:48	07:24
	20:51 20:28		19:39	07:09 (T77) 18:47	17:00	16:38
6	05:40 06:08		06:40	07:13	08:15 (T85) 06:50	07:25
	20:51 20:27		19:38	18:45	08:26 (T85) 16:59	16:38
7	05:41 06:09		06:41	07:14	08:11 (T85) 06:51	07:26
	20:51 20:25		19:36	18:43	08:29 (T85) 16:58	16:38
8	05:41 06:10		06:43	07:15	08:09 (T85) 06:52	07:27
	20:50 20:24		19:34	18:42	08:31 (T85) 16:57	16:38
9	05:42 06:11		06:44	07:16	08:06 (T85) 06:53	07:28
	20:50 20:23		19:32	18:40	08:32 (T85) 16:55	16:38
10	05:43 06:12		06:45	07:17	08:06 (T85) 06:55	07:29
	20:50 20:21		19:31	18:38	08:34 (T85) 16:54	16:38
11	05:43 06:13		06:46	07:18	08:04 (T85) 06:56	07:30
	20:49 20:20		19:29	18:37	08:35 (T85) 16:53	16:38
12	05:44 06:14		06:47	07:19	08:03 (T85) 06:57	07:31
	20:49 20:19		19:27	18:35	08:35 (T85) 16:52	16:38
13	05:45 06:15		06:48	07:21	08:02 (T85) 06:58	07:32
	20:48 20:17		19:25	18:33	08:35 (T85) 16:51	16:38
14	05:46 06:16		06:49	07:22	08:01 (T85) 07:00	07:33
	20:48 20:16		19:24	18:32	08:36 (T85) 16:50	16:39
15	05:47 06:17		06:50	07:23	08:01 (T85) 07:01	07:34
	20:47 20:15		19:22	18:30	08:37 (T85) 16:49	16:39
16	05:47 06:18		06:51	07:24	08:00 (T85) 07:02	07:35
	20:46 20:13		19:20	18:28	08:37 (T85) 16:49	16:39
17	05:48 06:19	07:08 (T77)	06:52	07:25	08:00 (T85) 07:03	07:36
	20:46 20:12	6	07:14 (T77)	18:27	08:36 (T85) 16:48	16:39
18	05:49 06:20	07:05 (T77)	06:53	07:26	07:59 (T85) 07:05	07:37
	20:45 20:10	12	07:17 (T77)	18:25	08:36 (T85) 16:47	16:40
19	05:50 06:21	07:02 (T77)	06:54	07:28	07:59 (T85) 07:06	07:38
	20:44 20:09	17	07:19 (T77)	18:24	08:35 (T85) 16:46	16:40
20	05:51 06:22	07:01 (T77)	06:55	07:29	08:00 (T85) 07:07	07:39
	20:44 20:07	19	07:20 (T77)	18:22	08:36 (T85) 16:45	16:40
21	05:52 06:23	06:59 (T77)	06:56	07:30	08:00 (T85) 07:08	07:40
	20:43 20:06	22	07:21 (T77)	18:21	08:35 (T85) 16:45	16:41
22	05:53 06:25	06:58 (T77)	06:57	07:31	08:00 (T85) 07:09	07:41
	20:42 20:04	24	07:22 (T77)	18:19	08:34 (T85) 16:44	16:41
23	05:54 06:26	06:57 (T77)	06:58	07:32	08:00 (T85) 07:11	07:42
	20:41 20:02	25	07:22 (T77)	18:18	08:33 (T85) 16:43	16:42
24	05:55 06:27	06:56 (T77)	07:00	07:34	08:02 (T85) 07:12	07:43
	20:40 20:01	27	07:23 (T77)	18:16	08:33 (T85) 16:43	16:42
25	05:56 06:28	06:56 (T77)	07:01	07:35	08:02 (T85) 07:13	07:44
	20:40 19:58	27	07:23 (T77)	18:15	08:32 (T85) 16:42	16:43
26	05:56 06:29	06:55 (T77)	07:02	07:36	08:03 (T85) 07:14	07:45
	20:39 19:56	28	07:23 (T77)	18:13	08:30 (T85) 16:42	16:44
27	05:57 06:30	06:55 (T77)	07:03	07:37	08:05 (T85) 07:15	07:46
	20:38 19:54	27	07:22 (T77)	18:12	08:29 (T85) 16:41	16:44
28	05:58 06:31	06:55 (T77)	07:04	07:38	08:06 (T85) 07:16	07:47
	20:37 19:53	27	07:22 (T77)	18:10	08:27 (T85) 16:41	16:45
29	05:59 06:32	06:55 (T77)	07:05	07:40	08:08 (T85) 07:18	07:48
	20:36 19:51	27	07:22 (T77)	18:09	08:25 (T85) 16:40	16:46
30	06:00 06:33	06:55 (T77)	07:06	07:41	08:12 (T85) 07:19	07:49
	20:35 19:50	26	07:21 (T77)	18:08	08:22 (T85) 16:40	16:47
31	06:01 06:34	06:55 (T77)		07:42		07:50
	20:34 19:48	25	07:20 (T77)	18:06		16:47
Potential sun hours	463	431	375	343	294	283
Total, worst case		339	82	716	1916	1927
Sun reduction		0.91	0.53	0.45	0.29	0.28
Oper. time red.		1.00	1.00	1.00	1.00	1.00
Wind dir. red.		0.68	0.68	0.64	0.66	0.68
Total reduction		0.62	0.36	0.29	0.19	0.19
Total, real		209	29	207	366	367

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

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

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10/11/2017 10:32 AM / 82

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2651 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (687)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	15:46 (T92) 07:25	06:47	17:17 (T73) 06:55	06:07	19:21 (T93) 05:37
2	07:40	15:47 (T92) 07:24	06:46	17:17 (T73) 06:53	06:06	19:20 (T93) 05:36
3	07:40	15:48 (T92) 07:23	06:44	17:16 (T73) 06:51	06:04	19:19 (T93) 05:36
4	07:40	15:49 (T92) 07:22	06:43	17:15 (T73) 06:49	06:03	19:18 (T93) 05:35
5	07:40	15:50 (T92) 07:21	06:41	17:14 (T73) 06:48	06:02	19:17 (T93) 05:35
6	07:40	15:51 (T92) 07:20	06:39	17:13 (T73) 06:46	06:00	19:16 (T93) 05:34
7	07:40	15:52 (T92) 07:19	06:38	17:12 (T73) 06:44	05:59	19:15 (T93) 05:34
8	07:40	15:53 (T92) 07:17	06:36	17:11 (T73) 06:43	05:58	19:14 (T93) 05:34
9	07:40	15:54 (T92) 07:16	06:35	17:10 (T73) 06:41	05:57	19:13 (T93) 05:34
10	07:40	15:55 (T92) 07:15	06:33	17:09 (T73) 06:39	05:55	19:12 (T93) 05:34
11	07:39	15:56 (T92) 07:14	06:31	17:08 (T73) 06:38	05:54	19:11 (T93) 05:33
12	07:39	15:57 (T92) 07:12	06:29	17:07 (T73) 06:36	05:53	19:10 (T93) 05:33
13	07:39	15:58 (T92) 07:11	06:28	17:06 (T73) 06:34	05:52	19:09 (T93) 05:33
14	07:38	16:00 (T92) 07:10	06:26	17:05 (T73) 06:33	05:51	19:08 (T93) 05:33
15	07:38	16:01 (T92) 07:08	06:24	17:04 (T73) 06:31	05:50	19:07 (T93) 05:33
16	07:37	16:02 (T92) 07:07	06:22	17:03 (T73) 06:29	05:49	19:06 (T93) 05:33
17	07:37	16:03 (T92) 07:06	06:21	17:02 (T73) 06:28	05:48	19:05 (T93) 05:33
18	07:36	16:04 (T92) 07:05	06:20	17:01 (T73) 06:27	05:47	19:04 (T93) 05:33
19	07:36	16:05 (T92) 07:04	06:19	17:00 (T73) 06:26	05:46	19:03 (T93) 05:33
20	07:35	16:06 (T92) 07:03	06:18	16:59 (T73) 06:25	05:45	19:02 (T93) 05:33
21	07:35	16:07 (T92) 07:02	06:17	16:58 (T73) 06:24	05:44	19:01 (T93) 05:33
22	07:34	16:08 (T92) 07:01	06:16	16:57 (T73) 06:23	05:43	19:00 (T93) 05:33
23	07:33	16:09 (T92) 07:00	06:15	16:56 (T73) 06:22	05:42	18:59 (T93) 05:33
24	07:32	16:10 (T92) 06:59	06:14	16:55 (T73) 06:21	05:41	18:58 (T93) 05:33
25	07:31	16:11 (T92) 06:58	06:13	16:54 (T73) 06:20	05:40	18:57 (T93) 05:33
26	07:30	16:12 (T92) 06:57	06:12	16:53 (T73) 06:19	05:39	18:56 (T93) 05:33
27	07:29	16:13 (T92) 06:56	06:11	16:52 (T73) 06:18	05:38	18:55 (T93) 05:33
28	07:28	16:14 (T92) 06:55	06:10	16:51 (T73) 06:17	05:37	18:54 (T93) 05:33
29	07:27	16:15 (T92) 06:54	06:09	16:50 (T73) 06:16	05:36	18:53 (T93) 05:33
30	07:26	16:16 (T92) 06:53	06:08	16:49 (T73) 06:15	05:35	18:52 (T93) 05:33
31	07:25	16:17 (T92) 06:52	06:07	16:48 (T73) 06:14	05:34	18:51 (T93) 05:33
Potential sun hours	294	295	370	401	452	457
Total, worst case	338	60	361	326	1359	1291
Sun reduction	0.39	0.42	0.44	0.51	0.55	0.59
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.69	0.67	0.67	0.65	0.65	0.65
Total reduction	0.27	0.29	0.30	0.33	0.36	0.38
Total, real	91	17	108	109	485	495

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

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

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Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2651 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (687)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Table with months Jan-Dec and values: 0.39, 0.42, 0.44, 0.51, 0.55, 0.59, 0.64, 0.91, 0.53, 0.45, 0.29, 0.28

Operational time

Table with directions N, NNE, NE, etc. and values: 210, 144, 244, 226, 221, 198, 388, 456, 848, 816, 949, 930, 1,255, 1,162, 542, 171, 8,760

Main shadow calendar table with columns for months (July-December) and rows for days with sunrise/sunset times and shadow data.

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

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

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Calculated: 10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2801 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (695)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns for months (Jan-Dec) and 2 rows of values (0.39 to 0.28)

Operational time

Table with 16 columns for wind directions (N to NNW) and 2 rows of values (210 to 8,760)

Main shadow calculation table with columns for months (January-June) and rows for each day of the month, including sunrise/sunset times and shadow reduction percentages.

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

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

Project:

Baron_SFA

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Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2801 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (695)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with months Jan-Dec and values 0.39, 0.42, 0.44, 0.51, 0.55, 0.59, 0.64, 0.91, 0.53, 0.45, 0.29, 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760

Idle start wind speed: Cut in wind speed from power curve

Main shadow calculation table with columns for months (July-December) and rows for specific times (05:37-20:34) and summary statistics (Potential sun hours, Total, worst case, etc.)

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

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

Project:
Baron_SFA

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Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2807 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (697)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	07:25	06:47	06:55	18:06 (T51) 06:07	19:07 (T84) 05:37
	16:48	17:24	18:00	19:36	18:46 (T51) 20:09	19:37 (T84) 20:40
2	07:40	07:24	06:46	06:53	18:06 (T51) 06:06	19:06 (T84) 05:36
	16:49	17:25	18:01	19:37	18:45 (T51) 20:10	19:39 (T84) 20:41
3	07:40	07:23	06:44	06:51	18:07 (T51) 06:04	19:05 (T84) 05:36
	16:50	17:27	18:02	19:38	18:44 (T51) 20:11	19:40 (T84) 20:41
4	07:40	07:22	06:43	06:49	18:08 (T51) 06:03	19:04 (T84) 05:35
	16:51	17:28	18:03	19:39	18:43 (T51) 20:12	19:40 (T84) 20:42
5	07:40	07:21	06:41	06:48	18:09 (T51) 06:02	19:03 (T84) 05:35
	16:52	17:29	18:05	19:40	18:41 (T51) 20:13	19:41 (T84) 20:43
6	07:40	07:20	06:39	06:46	18:10 (T51) 06:00	19:02 (T84) 05:35
	16:53	17:31	18:06	19:42	18:39 (T51) 20:14	19:41 (T84) 20:44
7	07:40	07:19	06:38	06:44	18:12 (T51) 05:59	19:02 (T84) 05:34
	16:54	17:32	18:07	19:43	18:38 (T51) 20:15	19:42 (T84) 20:44
8	07:40	07:17	07:36	06:43	18:14 (T51) 05:58	19:01 (T84) 05:34
	16:55	17:33	18:08	19:44	18:35 (T51) 20:16	19:42 (T84) 20:45
9	07:40	07:16	07:34	06:41	18:17 (T51) 05:57	19:01 (T84) 05:34
	16:56	17:34	18:09	19:45	18:31 (T51) 20:17	19:42 (T84) 20:46
10	07:40	07:15	07:33	06:39	05:56	19:00 (T84) 05:34
	16:57	17:36	18:11	19:46	20:18	19:42 (T84) 20:46
11	07:39	07:14	07:31	06:38	05:54	19:00 (T84) 05:34
	16:58	17:37	18:12	19:47	20:20	19:43 (T84) 20:47
12	07:39	07:12	07:29	06:36	05:53	19:00 (T84) 05:33
	16:59	17:38	18:13	19:48	20:21	19:43 (T84) 20:47
13	07:39	07:11	07:28	18:26 (T51) 06:34	05:52	19:00 (T84) 05:33
	17:00	17:40	18:14	18:37 (T51) 19:49	20:22	19:43 (T84) 20:48
14	07:38	07:10	07:26	18:21 (T51) 06:33	05:51	19:00 (T84) 05:33
	17:02	17:41	18:15	18:41 (T51) 19:51	20:23	19:43 (T84) 20:48
15	07:38	07:08	07:24	18:19 (T51) 06:31	05:50	19:00 (T84) 05:33
	17:03	17:42	18:16	18:44 (T51) 19:52	20:24	19:43 (T84) 20:49
16	07:37	07:07	07:22	18:16 (T51) 06:29	05:49	19:00 (T84) 05:33
	17:04	17:44	18:18	18:56 (T50) 19:53	20:25	19:43 (T84) 20:49
17	07:37	07:06	07:21	18:14 (T51) 06:28	05:48	19:00 (T84) 05:33
	17:05	17:45	18:19	18:57 (T50) 19:54	20:26	19:43 (T84) 20:50
18	07:36	07:04	07:19	18:12 (T51) 06:26	05:47	19:00 (T84) 05:33
	17:06	17:46	18:20	18:58 (T50) 19:55	20:27	19:42 (T84) 20:50
19	07:36	07:03	07:17	18:12 (T51) 06:25	05:46	19:00 (T84) 05:33
	17:07	17:47	18:21	19:00 (T50) 19:56	20:28	19:42 (T84) 20:50
20	07:35	07:01	07:15	18:10 (T51) 06:23	05:45	19:01 (T84) 05:34
	17:09	17:49	18:22	19:01 (T50) 19:57	20:29	19:43 (T84) 20:51
21	07:35	07:00	07:14	18:09 (T51) 06:22	05:44	19:02 (T84) 05:34
	17:10	17:50	18:23	19:02 (T50) 19:58	20:30	19:42 (T84) 20:51
22	07:34	06:58	07:12	18:08 (T51) 06:20	05:44	19:02 (T84) 05:34
	17:11	17:51	18:25	19:03 (T50) 20:00	20:31	19:42 (T84) 20:51
23	07:33	06:57	07:10	18:08 (T51) 06:19	05:43	19:02 (T84) 05:34
	17:12	17:52	18:26	19:04 (T50) 20:00	20:32	19:42 (T84) 20:51
24	07:32	06:55	07:09	18:07 (T51) 06:17	05:42	19:03 (T84) 05:34
	17:14	17:54	18:27	19:03 (T50) 20:01	20:33	19:42 (T84) 20:51
25	07:32	06:54	07:07	18:06 (T51) 06:16	05:41	19:03 (T84) 05:35
	17:15	17:55	18:28	19:02 (T50) 20:02	20:34	19:41 (T84) 20:52
26	07:31	06:52	07:05	18:05 (T51) 06:14	05:40	19:03 (T84) 05:35
	17:16	17:56	18:29	19:01 (T50) 20:03	20:35	19:41 (T84) 20:52
27	07:30	06:51	07:03	18:06 (T51) 06:13	19:17 (T84) 05:40	19:05 (T84) 05:35
	17:18	17:57	18:30	19:01 (T50) 20:04	19:30 (T84) 20:36	19:41 (T84) 20:52
28	07:29	06:49	07:02	18:06 (T51) 06:11	19:13 (T84) 05:39	19:05 (T84) 05:36
	17:19	17:59	18:31	19:00 (T50) 20:05	19:32 (T84) 20:36	19:40 (T84) 20:52
29	07:28	06:48	07:00	18:05 (T51) 06:10	19:11 (T84) 05:38	19:05 (T84) 05:36
	17:20	17:59	18:33	18:58 (T50) 20:06	19:35 (T84) 20:37	19:40 (T84) 20:52
30	07:27	06:47	06:58	18:05 (T51) 06:08	19:08 (T84) 05:38	19:06 (T84) 05:37
	17:21	17:59	18:34	18:56 (T50) 20:07	19:36 (T84) 20:38	19:40 (T84) 20:52
31	07:26	06:46	06:56	18:06 (T51) 06:07	05:37	19:06 (T84) 05:37
	17:23	17:59	18:35	18:54 (T50) 20:08	20:39	19:39 (T84) 20:53
Potential sun hours	294	295	370	401	452	457
Total, worst case			875	357	1210	606
Sun reduction			0.44	0.51	0.55	0.59
Oper. time red.			1.00	1.00	1.00	1.00
Wind dir. red.			0.68	0.67	0.65	0.65
Total reduction			0.30	0.34	0.36	0.38
Total, real			262	123	434	233

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

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

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Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 2807 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (697)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37	19:19 (T84) 06:02	19:11 (T84) 06:35	07:07	06:43	07:20
	20:52	20	19:39 (T84) 20:32	42	19:53 (T84) 19:46	18:54 17:05 16:39
2	05:38	19:19 (T84) 06:03	19:11 (T84) 06:36	07:08	06:45	07:21
	20:52	21	19:40 (T84) 20:31	42	19:53 (T84) 19:44	18:52 17:04 16:39
3	05:38	19:18 (T84) 06:04	19:11 (T84) 06:37	18:15 (T51) 07:09	06:46	07:22
	20:51	23	19:41 (T84) 20:30	42	19:53 (T84) 19:43	14 18:29 (T51) 18:50 17:02 16:39
4	05:39	19:18 (T84) 06:06	19:11 (T84) 06:38	18:11 (T51) 07:10	06:47	07:23
	20:51	24	19:42 (T84) 20:29	41	19:52 (T84) 19:41	21 18:32 (T51) 18:48 17:01 16:39
5	05:39	19:18 (T84) 06:07	19:12 (T84) 06:39	18:08 (T51) 07:11	06:48	07:24
	20:51	25	19:43 (T84) 20:28	40	19:52 (T84) 19:39	26 18:34 (T51) 18:47 17:00 16:38
6	05:40	19:17 (T84) 06:08	19:12 (T84) 06:40	18:06 (T51) 07:13	06:50	07:25
	20:51	26	19:43 (T84) 20:26	39	19:51 (T84) 19:38	29 18:35 (T51) 18:45 16:59 16:38
7	05:41	19:17 (T84) 06:09	19:12 (T84) 06:41	18:04 (T51) 07:14	06:51	07:26
	20:51	27	19:44 (T84) 20:25	39	19:51 (T84) 19:36	32 18:36 (T51) 18:43 16:58 16:38
8	05:41	19:16 (T84) 06:10	19:13 (T84) 06:42	18:02 (T51) 07:15	06:52	07:27
	20:50	28	19:44 (T84) 20:24	37	19:50 (T84) 19:34	35 18:37 (T51) 18:42 16:57 16:38
9	05:42	19:16 (T84) 06:11	19:13 (T84) 06:44	18:01 (T51) 07:16	06:53	07:28
	20:50	29	19:45 (T84) 20:23	36	19:49 (T84) 19:32	37 18:38 (T51) 18:40 16:55 16:38
10	05:43	19:16 (T84) 06:12	19:14 (T84) 06:45	18:00 (T51) 07:17	06:55	07:29
	20:49	30	19:46 (T84) 20:21	34	19:48 (T84) 19:31	38 18:38 (T51) 18:38 16:54 16:38
11	05:43	19:16 (T84) 06:13	19:15 (T84) 06:46	17:58 (T51) 07:18	06:56	07:29
	20:49	31	19:47 (T84) 20:20	32	19:47 (T84) 19:29	40 18:38 (T51) 18:37 16:53 16:38
12	05:44	19:15 (T84) 06:14	19:16 (T84) 06:47	17:57 (T51) 07:19	06:57	07:30
	20:49	32	19:47 (T84) 20:19	30	19:46 (T84) 19:27	48 18:45 (T50) 18:35 16:52 16:38
13	05:45	19:15 (T84) 06:15	19:17 (T84) 06:48	17:56 (T51) 07:20	06:58	07:31
	20:48	33	19:48 (T84) 20:17	27	19:44 (T84) 19:25	51 18:47 (T50) 18:33 16:51 16:38
14	05:46	19:14 (T84) 06:16	19:19 (T84) 06:49	17:56 (T51) 07:22	07:00	07:32
	20:48	35	19:49 (T84) 20:16	23	19:42 (T84) 19:24	52 18:48 (T50) 18:32 16:50 16:39
15	05:47	19:14 (T84) 06:17	19:21 (T84) 06:50	17:55 (T51) 07:23	07:01	07:33
	20:47	36	19:50 (T84) 20:14	18	19:39 (T84) 19:22	54 18:49 (T50) 18:30 16:49 16:39
16	05:47	19:13 (T84) 06:18	19:24 (T84) 06:51	17:54 (T51) 07:24	07:02	07:33
	20:46	36	19:49 (T84) 20:13	12	19:36 (T84) 19:20	55 18:49 (T50) 18:28 16:49 16:39
17	05:48	19:13 (T84) 06:19	19:25 (T84) 06:52	17:54 (T51) 07:25	07:03	07:34
	20:46	37	19:50 (T84) 20:11	19:18	56 18:50 (T50) 18:27 16:48 16:39	
18	05:49	19:13 (T84) 06:20	19:26 (T84) 06:53	17:53 (T51) 07:26	07:04	07:35
	20:45	38	19:51 (T84) 20:10	19:16	57 18:50 (T50) 18:25 16:47 16:40	
19	05:50	19:13 (T84) 06:21	19:27 (T84) 06:54	17:53 (T51) 07:27	07:06	07:35
	20:44	38	19:51 (T84) 20:09	19:15	56 18:49 (T50) 18:24 16:46 16:40	
20	05:51	19:12 (T84) 06:22	19:28 (T84) 06:55	17:54 (T51) 07:29	07:07	07:36
	20:44	40	19:52 (T84) 20:07	19:13	56 18:50 (T50) 18:22 16:45 16:40	
21	05:52	19:12 (T84) 06:23	19:29 (T84) 06:56	17:54 (T51) 07:30	07:08	07:36
	20:43	40	19:52 (T84) 20:05	19:11	55 18:49 (T50) 18:21 16:45 16:41	
22	05:53	19:11 (T84) 06:24	19:30 (T84) 06:57	17:54 (T51) 07:31	07:09	07:37
	20:42	41	19:52 (T84) 20:04	19:09	53 18:47 (T50) 18:19 16:44 16:41	
23	05:54	19:11 (T84) 06:26	19:31 (T84) 06:58	17:54 (T51) 07:32	07:11	07:37
	20:41	41	19:52 (T84) 20:02	19:08	52 18:46 (T50) 18:18 16:43 16:42	
24	05:55	19:11 (T84) 06:27	19:32 (T84) 06:59	17:55 (T51) 07:33	07:12	07:38
	20:40	42	19:53 (T84) 20:01	19:06	49 18:44 (T50) 18:16 16:43 16:42	
25	05:56	19:11 (T84) 06:28	19:33 (T84) 07:01	17:55 (T51) 07:35	07:13	07:38
	20:39	42	19:53 (T84) 19:58	19:04	47 18:42 (T50) 18:15 16:42 16:43	
26	05:56	19:11 (T84) 06:29	19:34 (T84) 07:02	17:56 (T51) 07:36	07:14	07:39
	20:38	42	19:53 (T84) 19:56	19:02	44 18:40 (T50) 18:13 16:42 16:44	
27	05:57	19:11 (T84) 06:30	19:35 (T84) 07:03	17:57 (T51) 07:37	07:15	07:39
	20:38	42	19:53 (T84) 19:54	19:01	41 18:38 (T50) 18:12 16:41 16:44	
28	05:58	19:11 (T84) 06:31	19:36 (T84) 07:04	17:59 (T51) 07:38	07:16	07:39
	20:37	42	19:53 (T84) 19:53	18:59	31 18:36 (T50) 18:10 16:41 16:45	
29	05:59	19:11 (T84) 06:32	19:37 (T84) 07:05	18:01 (T51) 07:40	07:17	07:40
	20:36	42	19:53 (T84) 19:51	18:57	21 18:22 (T51) 18:09 16:40 16:46	
30	06:00	19:11 (T84) 06:33	19:38 (T84) 07:06	18:03 (T51) 07:41	07:19	07:40
	20:34	42	19:53 (T84) 19:49	18:55	16 18:19 (T51) 18:08 16:40 16:47	
31	06:01	19:11 (T84) 06:34	19:39 (T84) 07:07	18:04 (T51) 07:42	07:40	07:40
	20:33	42	19:53 (T84) 19:48	18:56	15 18:06 (T51) 18:06 16:47 16:47	
Potential sun hours	463	431	375	343	294	283
Total, worst case	1067	534	1166			
Sun reduction	0.64	0.91	0.53			
Oper. time red.	1.00	1.00	1.00			
Wind dir. red.	0.65	0.65	0.68			
Total reduction	0.42	0.59	0.36			
Total, real	445	317	420			

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

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

Project:

Baron_SFA

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10/11/2017 10:32 AM / 88

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 3670 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (745)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

Table with 12 columns (months) and 31 rows (days). Each cell contains a time range in hh:mm format, representing operational time. Summary statistics are provided at the bottom, including Potential sun hours, Total, worst case, Sun reduction, Oper. time red., Wind dir. red., Total reduction, and Total, real.

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

Matrix with 4 columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

WindPRO is developed by EMD International A/S, Niels Jernesvej 10, DK-9220 Aalborg Ø, Tel. +45 96 35 44 44, Fax +45 96 35 44 46, e-mail: windpro@emd.dk

Project:

Baron_SFA

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10/11/2017 10:32 AM / 89

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4058 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (796)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

January	February	March	April	May	June	
1 07:40	09:09 (T11) 07:25	09:10 (T11) 06:47	06:54	07:58 (T4) 06:07	05:36	
16:48	58 15:10 (T22) 17:24	45 09:55 (T11) 18:00	19:36	64 18:37 (T6) 20:09	20:40 15 19:20 (T17)	
2 07:40	09:09 (T11) 07:24	09:10 (T11) 06:46	06:53	07:57 (T4) 06:05	05:36	
16:49	58 15:10 (T22) 17:25	44 09:54 (T11) 18:01	19:37	66 18:37 (T6) 20:10	20:41 18 19:21 (T17)	
3 07:40	09:09 (T11) 07:23	09:11 (T11) 06:44	06:51	07:57 (T4) 06:04	05:35	
16:50	59 15:10 (T22) 17:26	43 09:54 (T11) 18:02	19:38	67 18:37 (T6) 20:11	20:42 20 19:23 (T17)	
4 07:40	09:08 (T11) 07:22	09:12 (T11) 06:42	06:49	07:57 (T4) 06:03	05:35	
16:51	60 15:10 (T22) 17:28	42 09:54 (T11) 18:03	19:39	68 18:38 (T6) 20:12	20:42 22 19:23 (T17)	
5 07:40	09:08 (T11) 07:21	09:12 (T11) 06:41	06:47	07:57 (T4) 06:01	05:35	
16:51	60 15:10 (T22) 17:29	41 09:53 (T11) 18:04	19:40	68 18:38 (T6) 20:13	20:43 24 19:25 (T17)	
6 07:40	09:08 (T11) 07:20	09:13 (T11) 06:39	06:46	07:57 (T4) 06:00	05:34	
16:52	60 15:10 (T22) 17:30	38 09:51 (T11) 18:06	19:41	67 18:37 (T6) 20:14	20:44 25 19:26 (T17)	
7 07:40	09:08 (T11) 07:19	09:14 (T11) 06:38	06:44	07:56 (T4) 05:59	05:34	
16:53	60 15:10 (T22) 17:31	37 09:51 (T11) 18:07	19:43	67 18:37 (T6) 20:15	20:44 27 19:26 (T17)	
8 07:40	09:08 (T11) 07:17	09:15 (T11) 07:36	06:42	07:57 (T4) 05:58	05:34	
16:54	61 15:11 (T22) 17:33	35 09:50 (T11) 19:08	19:44	65 18:37 (T6) 20:16	20:45 28 19:27 (T17)	
9 07:40	09:08 (T11) 07:16	09:17 (T11) 07:34	06:41	07:57 (T4) 05:56	05:33	
16:56	62 15:11 (T22) 17:34	32 09:49 (T11) 19:09	19:45	63 18:36 (T6) 20:17	20:46 29 19:28 (T17)	
10 07:40	09:08 (T11) 07:15	09:17 (T11) 07:32	06:39	07:58 (T4) 05:55	05:33	
16:57	61 15:10 (T22) 17:35	29 09:46 (T11) 19:10	19:46	59 18:35 (T6) 20:19	20:46 30 19:29 (T17)	
11 07:39	09:08 (T11) 07:14	09:19 (T11) 07:31	06:37	07:59 (T4) 05:54	05:33	
16:58	60 15:10 (T22) 17:37	26 09:45 (T11) 19:12	19:47	56 18:35 (T6) 20:20	20:47 30 19:29 (T17)	
12 07:39	09:07 (T11) 07:12	09:22 (T11) 07:29	06:36	08:00 (T4) 05:53	05:33	
16:59	60 15:09 (T22) 17:38	20 09:42 (T11) 19:13	19:48	50 18:33 (T6) 20:21	20:47 31 19:30 (T17)	
13 07:39	09:07 (T11) 07:11	09:25 (T11) 07:27	06:34	08:01 (T4) 05:52	05:33	
17:00	60 15:09 (T22) 17:39	13 09:38 (T11) 19:14	19:49	45 18:31 (T6) 20:22	20:48 32 19:31 (T17)	
14 07:38	09:08 (T11) 07:10	07:26	06:32	08:03 (T4) 05:51	05:33	
17:01	58 15:09 (T22) 17:41	19:15	19:50	38 18:30 (T6) 20:23	20:48 32 19:31 (T17)	
15 07:38	09:07 (T11) 07:08	07:24	06:31	08:05 (T4) 05:50	05:33	
17:02	56 15:08 (T22) 17:42	19:16	19:52	27 18:27 (T6) 20:24	20:49 32 19:31 (T17)	
16 07:38	09:08 (T11) 07:07	07:22	06:29	08:11 (T4) 05:49	05:33	
17:03	52 15:06 (T22) 17:43	19:17	19:53	4 08:15 (T4) 20:25	20:49 33 19:32 (T17)	
17 07:37	09:07 (T11) 07:06	07:20	06:28	05:48	05:33	
17:05	44 09:51 (T11) 17:44	19:19	19:54	20:26	20:50 33 19:32 (T17)	
18 07:36	09:07 (T11) 07:04	07:19	06:26	05:47	05:33	
17:06	44 09:51 (T11) 17:46	19:20	19:55	20:27	20:50 33 19:32 (T17)	
19 07:36	09:07 (T11) 07:03	07:17	06:24	05:46	05:33	
17:07	45 09:52 (T11) 17:47	19:21	19:56	20:28	20:50 33 19:32 (T17)	
20 07:35	09:07 (T11) 07:01	07:15	06:23	05:45	05:33	
17:08	46 09:53 (T11) 17:48	19:22	2 08:22 (T4) 06:23	20:29	20:51 34 19:33 (T17)	
21 07:35	09:07 (T11) 07:00	07:14	06:21	05:44	05:33	
17:09	46 09:53 (T11) 17:50	19:23	16 08:30 (T4) 19:58	20:30	20:51 34 19:33 (T17)	
22 07:34	09:08 (T11) 06:58	07:12	06:20	05:43	05:33	
17:11	46 09:54 (T11) 17:51	19:24	22 08:33 (T4) 20:00	20:31	20:51 34 19:34 (T17)	
23 07:33	09:08 (T11) 06:57	07:10	06:18	05:42	05:34	
17:12	46 09:54 (T11) 17:52	19:26	26 08:34 (T4) 20:00	20:32	20:51 34 19:34 (T17)	
24 07:33	09:08 (T11) 06:55	07:08	06:17	05:41	05:34	
17:13	46 09:54 (T11) 17:53	19:27	30 08:36 (T4) 20:01	20:33	20:52 33 19:33 (T17)	
25 07:32	09:08 (T11) 06:54	07:07	06:15	05:41	05:34	
17:15	47 09:55 (T11) 17:55	19:28	32 08:37 (T4) 20:02	20:34	20:52 33 19:33 (T17)	
26 07:31	09:08 (T11) 06:52	07:05	06:14	05:40	05:35	
17:16	47 09:55 (T11) 17:56	19:29	35 08:38 (T4) 20:03	20:35	20:52 33 19:34 (T17)	
27 07:30	09:08 (T11) 06:51	07:03	06:12	05:39	05:35	
17:17	47 09:55 (T11) 17:57	19:30	37 08:38 (T4) 20:04	20:36	20:52 33 19:34 (T17)	
28 07:29	09:08 (T11) 06:49	07:01	06:11	05:39	05:35	
17:18	47 09:55 (T11) 17:58	19:31	38 08:39 (T4) 20:05	20:37	20:52 32 19:34 (T17)	
29 07:28	09:08 (T11) 06:48	07:00	06:10	05:38	05:36	
17:20	47 09:55 (T11) 17:59	19:32	50 18:31 (T6) 20:06	20:37	20:52 32 19:34 (T17)	
30 07:27	09:09 (T11) 06:47	06:58	06:08	05:37	05:36	
17:21	46 09:55 (T11) 17:59	19:34	57 18:34 (T6) 20:07	20:38	20:52 31 19:33 (T17)	
31 07:26	09:09 (T11) 06:46	06:56	06:07	05:37	05:36	
17:22	46 09:55 (T11) 17:59	19:35	62 18:35 (T6) 20:08	20:39	20:52 31 19:33 (T17)	
Potential sun hours	293	295	370	401	452	457
Total, worst case	1635	445	407	874	10	890
Sun reduction	0.39	0.42	0.44	0.51	0.55	0.59
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.62	0.60	0.66	0.67	0.64	0.64
Total reduction	0.24	0.25	0.29	0.34	0.35	0.38
Total, real	392	112	118	295	4	336

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

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

Baron_SFA

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10/11/2017 10:32 AM / 90

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4058 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (796)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December
1 05:37 20:52 31	19:03 (T17) 06:02 19:34 (T17) 20:32	06:35 19:46	07:58 (T4) 07:07 18:34 (T6) 18:53	06:43 17:05	08:47 (T11) 07:20 09:16 (T11) 16:39
2 05:37 20:52 30	19:03 (T17) 06:03 19:33 (T17) 20:31	06:36 19:44	07:57 (T4) 07:08 18:34 (T6) 18:52	06:45 17:03	08:45 (T11) 07:21 09:18 (T11) 16:39
3 05:38 20:52 29	19:04 (T17) 06:04 19:33 (T17) 20:30	06:37 19:43	07:56 (T4) 07:09 18:34 (T6) 18:50	06:46 17:02	08:45 (T11) 07:22 09:20 (T11) 16:38
4 05:38 20:51 28	19:05 (T17) 06:05 19:33 (T17) 20:29	06:38 19:41	07:54 (T4) 07:10 18:34 (T6) 18:48	06:47 17:01	08:43 (T11) 07:23 09:21 (T11) 16:38
5 05:39 20:51 28	19:05 (T17) 06:06 19:33 (T17) 20:28	06:39 19:39	07:53 (T4) 07:11 18:34 (T6) 18:46	06:48 17:00	08:42 (T11) 07:24 09:21 (T11) 16:38
6 05:40 20:51 25	19:07 (T17) 06:07 19:32 (T17) 20:26	06:40 19:37	07:53 (T4) 07:12 18:33 (T6) 18:45	06:50 16:58	08:42 (T11) 07:25 09:23 (T11) 16:38
7 05:40 20:51 24	19:07 (T17) 06:08 19:31 (T17) 20:25	06:41 19:36	07:52 (T4) 07:14 18:33 (T6) 18:43	06:51 16:57	08:41 (T11) 07:26 09:24 (T11) 16:38
8 05:41 20:50 23	19:08 (T17) 06:09 19:31 (T17) 20:24	06:42 19:34	07:51 (T4) 07:15 18:32 (T6) 18:41	06:52 16:56	08:42 (T11) 07:27 09:25 (T11) 16:38
9 05:42 20:50 22	19:09 (T17) 06:10 19:31 (T17) 20:23	06:43 19:32	07:51 (T4) 07:16 18:31 (T6) 18:40	06:53 16:55	08:41 (T11) 07:28 09:25 (T11) 16:38
10 05:42 20:50 19	19:10 (T17) 06:11 19:29 (T17) 20:21	06:44 19:30	07:50 (T4) 07:17 18:30 (T6) 18:38	06:55 16:54	08:40 (T11) 07:29 09:25 (T11) 16:38
11 05:43 20:49 16	19:12 (T17) 06:12 19:28 (T17) 20:20	06:45 19:29	07:50 (T4) 07:18 18:29 (T6) 18:36	06:56 16:53	08:41 (T11) 07:30 09:27 (T11) 16:38
12 05:44 20:49 13	19:14 (T17) 06:13 19:27 (T17) 20:19	06:46 19:27	07:50 (T4) 07:19 18:27 (T6) 18:35	06:57 16:52	08:40 (T11) 07:30 09:27 (T11) 16:38
13 05:44 20:48 7	19:17 (T17) 06:15 19:24 (T17) 20:17	06:48 19:25	07:50 (T4) 07:20 18:25 (T6) 18:33	06:58 16:51	08:40 (T11) 07:31 09:27 (T11) 16:38
14 05:45 20:48 7	19:24 (T17) 20:17 06:16 20:16	19:25 19:23	07:50 (T4) 07:22 18:22 (T6) 18:31	06:59 16:50	08:41 (T11) 07:32 09:28 (T11) 16:38
15 05:46 20:47 16	06:17 20:14	19:23 19:22	07:50 (T4) 07:23 08:28 (T4) 18:30	07:01 16:49	08:41 (T11) 07:33 09:28 (T11) 16:38
16 05:47 20:46 17	06:18 20:13	19:22 19:20	07:50 (T4) 07:24 08:27 (T4) 18:28	07:02 16:48	08:41 (T11) 07:33 09:28 (T11) 16:38
17 05:48 20:46 18	06:19 20:11	19:20 19:18	07:51 (T4) 07:25 08:26 (T4) 18:27	07:03 16:47	08:42 (T11) 07:34 09:29 (T11) 16:39
18 05:49 20:45 19	06:20 20:10	19:18 19:16	07:52 (T4) 07:26 08:25 (T4) 18:25	07:05 16:46	08:42 (T11) 07:35 09:28 (T11) 16:39
19 05:49 20:44 20	06:21 20:09	19:16 19:15	07:52 (T4) 07:27 08:25 (T4) 18:23	07:06 16:46	08:42 (T11) 07:35 09:28 (T11) 16:39
20 05:50 20:44 21	06:22 20:07	19:15 19:13	07:54 (T4) 07:29 08:21 (T4) 18:22	07:07 16:45	08:42 (T11) 07:36 09:28 (T11) 16:40
21 05:51 20:43 22	06:23 20:05	19:13 19:11	07:55 (T4) 07:30 08:19 (T4) 18:20	07:08 16:44	08:43 (T11) 07:37 09:29 (T11) 16:40
22 05:52 20:42 23	06:24 20:04	19:11 19:09	07:57 (T4) 07:31 08:16 (T4) 18:19	07:09 16:43	08:43 (T11) 07:37 09:29 (T11) 16:41
23 05:53 20:41 24	06:25 20:02	19:09 19:07	08:02 (T4) 07:32 08:11 (T4) 18:17	07:11 16:43	08:44 (T11) 07:38 09:28 (T11) 16:41
24 05:54 20:40 25	06:26 20:01	19:07 19:06	07:33 18:16	16:42 16:42	08:45 (T11) 07:38 09:29 (T11) 16:42
25 05:55 20:40 26	06:27 19:58	19:04 19:02	07:35 18:13	16:42 16:41	08:45 (T11) 07:38 14:44 (T22) 16:43
26 05:56 20:39 27	06:28 19:56	19:01 19:02	07:36 18:13	16:41 16:41	08:46 (T11) 07:39 14:44 (T22) 16:43
27 05:57 20:38 28	06:29 19:54	08:12 (T4) 07:02 08:18 (T4) 19:00	18:11 18:11	16:41 16:41	08:46 (T11) 07:39 14:47 (T22) 16:44
28 05:58 20:37 29	06:31 19:53	08:07 (T4) 07:04 18:29 (T6) 18:59	07:38 18:10	16:40 16:40	08:47 (T11) 07:39 14:48 (T22) 16:44
29 05:59 20:36 30	06:32 19:51	08:04 (T4) 07:05 18:31 (T6) 18:57	07:40 18:09	09:54 (T11) 07:18 10:09 (T11) 16:40	08:48 (T11) 07:40 14:50 (T22) 16:45
30 06:00 20:35 31	06:33 19:49	08:02 (T4) 07:06 18:32 (T6) 18:55	07:41 18:07	09:50 (T11) 07:19 10:12 (T11) 16:39	08:49 (T11) 07:40 14:51 (T22) 16:46
Potential sun hours 464	431	375	343	294	283
Total, worst case 295	166	1132	63	1365	1747
Sun reduction 0.64	0.91	0.53	0.45	0.29	0.28
Oper. time red. 1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red. 0.64	0.67	0.66	0.60	0.61	0.64
Total reduction 0.41	0.60	0.35	0.27	0.17	0.18
Total, real 121	100	396	17	239	310

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

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

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10/11/2017 10:32 AM / 91

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4084 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (799)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June			
1	07:40	09:53 (T9)	07:25	06:47	07:44 (T1)	06:54	06:07	05:36	18:56 (T22)
	16:48	41 10:34 (T9)	17:24	18:00	55 17:04 (T26)	19:36	20:09	20:40	34 19:30 (T22)
2	07:40	09:53 (T9)	07:24	06:46	07:44 (T1)	06:53	06:05	05:36	18:55 (T22)
	16:49	41 10:34 (T9)	17:25	18:01	61 17:07 (T26)	19:37	20:10	20:41	36 19:31 (T22)
3	07:40	09:54 (T9)	07:23	06:44	07:43 (T1)	06:51	06:04	05:35	18:55 (T22)
	16:50	40 10:34 (T9)	17:26	18:02	65 17:08 (T26)	19:38	20:11	20:42	37 19:32 (T22)
4	07:40	09:54 (T9)	07:22	06:42	07:43 (T1)	06:49	06:03	05:35	18:54 (T22)
	16:51	40 10:34 (T9)	17:28	18:03	68 17:09 (T26)	19:39	20:12	20:42	38 19:32 (T22)
5	07:40	09:55 (T9)	07:21	06:41	07:43 (T1)	06:47	06:01	05:35	18:54 (T22)
	16:52	39 10:34 (T9)	17:29	18:04	70 17:11 (T26)	19:40	20:13	20:43	39 19:33 (T22)
6	07:40	09:56 (T9)	07:20	06:39	07:42 (T1)	06:46	06:00	05:34	18:54 (T22)
	16:52	38 10:34 (T9)	17:30	18:06	73 17:11 (T26)	19:41	20:14	20:44	40 19:34 (T22)
7	07:40	09:57 (T9)	07:19	06:38	07:42 (T1)	06:44	05:59	05:34	18:53 (T22)
	16:53	37 10:34 (T9)	17:31	18:07	73 17:11 (T26)	19:43	20:15	20:44	40 19:33 (T22)
8	07:40	09:58 (T9)	07:17	07:36	08:41 (T1)	06:42	05:58	05:34	18:53 (T22)
	16:55	35 10:33 (T9)	17:33	19:08	74 18:11 (T26)	19:44	20:16	20:45	41 19:34 (T22)
9	07:40	09:59 (T9)	07:16	07:34	08:42 (T1)	06:41	05:56	05:33	18:53 (T22)
	16:56	33 10:32 (T9)	17:34	19:09	74 18:12 (T26)	19:45	20:17	20:46	42 19:35 (T22)
10	07:40	10:00 (T9)	07:15	07:32	08:42 (T1)	06:39	05:55	05:33	18:53 (T22)
	16:57	32 10:32 (T9)	17:35	19:10	73 18:12 (T26)	19:46	20:19	20:46	43 19:36 (T22)
11	07:39	10:02 (T9)	07:14	07:31	08:42 (T1)	06:37	05:54	05:33	18:53 (T22)
	16:58	30 10:32 (T9)	17:37	19:12	72 18:11 (T26)	19:47	20:20	20:47	43 19:36 (T22)
12	07:39	10:03 (T9)	07:12	07:29	08:43 (T1)	06:36	05:53	05:33	18:53 (T22)
	16:59	27 10:30 (T9)	17:38	19:13	78 18:35 (T34)	19:48	20:21	20:47	44 19:37 (T22)
13	07:39	10:05 (T9)	07:11	07:27	08:44 (T1)	06:34	05:52	05:33	18:54 (T22)
	17:00	25 10:30 (T9)	17:39	19:14	81 18:37 (T34)	19:49	20:22	20:48	43 19:37 (T22)
14	07:38	10:07 (T9)	07:10	07:26	08:44 (T1)	06:32	05:51	05:33	18:54 (T22)
	17:01	22 10:29 (T9)	17:41	19:15	81 18:38 (T34)	19:50	20:23	20:48	44 19:38 (T22)
15	07:38	10:09 (T9)	07:08	07:24	08:45 (T1)	06:31	05:50	05:33	18:54 (T22)
	17:02	18 10:27 (T9)	17:42	19:16	80 18:39 (T34)	19:52	20:24	20:49	44 19:38 (T22)
16	07:38	10:11 (T9)	07:07	07:22	08:47 (T1)	06:29	05:49	05:33	18:54 (T22)
	17:03	13 10:24 (T9)	17:43	19:17	75 18:40 (T34)	19:53	20:25	20:49	44 19:38 (T22)
17	07:37	07:06	07:06	07:20	08:49 (T1)	06:28	05:48	05:33	18:54 (T22)
	17:05	17:44	19:19	70 18:40 (T34)	19:54	20:26	20:50	44 19:38 (T22)	
18	07:36	07:04	07:04	07:19	08:51 (T1)	06:26	05:47	05:33	18:54 (T22)
	17:06	17:46	19:20	62 18:40 (T34)	19:55	20:27	20:50	45 19:39 (T22)	
19	07:36	07:03	07:03	07:17	17:42 (T26)	06:24	05:46	05:33	18:54 (T22)
	17:07	17:47	19:21	44 18:39 (T34)	19:56	20:28	20:50	45 19:39 (T22)	
20	07:35	07:01	07:01	07:15	17:45 (T26)	06:23	05:45	05:33	18:54 (T22)
	17:08	17:48	19:22	38 18:39 (T34)	19:57	20:29	20:51	45 19:39 (T22)	
21	07:35	07:00	07:00	07:14	17:48 (T26)	06:21	05:44	05:33	18:54 (T22)
	17:09	17:50	15 08:13 (T1)	19:23	30 18:38 (T34)	19:58	20:30	20:51	45 19:39 (T22)
22	07:34	06:58	07:54 (T1)	07:12	18:17 (T34)	06:20	05:43	05:33	18:55 (T22)
	17:11	17:51	22 08:16 (T1)	19:24	20 18:37 (T34)	20:00	20:31	20:51	45 19:40 (T22)
23	07:33	06:57	07:53 (T1)	07:10	18:18 (T34)	06:18	05:42	05:34	18:55 (T22)
	17:12	17:52	25 08:18 (T1)	19:26	18 18:36 (T34)	20:00	20:32	20:51	45 19:40 (T22)
24	07:32	06:55	07:50 (T1)	07:08	18:20 (T34)	06:17	05:41	05:34	18:55 (T22)
	17:13	17:53	29 08:19 (T1)	19:27	15 18:35 (T34)	20:01	20:33	13 19:05 (T22)	05:34 45 19:40 (T22)
25	07:32	06:54	07:49 (T1)	07:07	18:21 (T34)	06:15	05:41	19:02 (T22)	05:34 45 18:55 (T22)
	17:15	17:55	32 08:21 (T1)	19:28	11 18:32 (T34)	20:02	20:34	18 19:20 (T22)	20:52 44 19:39 (T22)
26	07:31	06:52	07:48 (T1)	07:05	06:14	05:40	05:35	19:01 (T22)	05:35 44 18:56 (T22)
	17:16	17:56	34 08:22 (T1)	19:29	20:03	20:35	22 19:23 (T22)	20:52 44 19:40 (T22)	
27	07:30	06:51	07:46 (T1)	07:03	06:12	05:39	05:36	19:00 (T22)	05:35 44 18:56 (T22)
	17:17	17:57	36 08:22 (T1)	19:30	20:04	20:36	24 19:24 (T22)	20:52 44 19:40 (T22)	
28	07:29	06:49	07:46 (T1)	07:01	06:11	05:39	05:36	18:59 (T22)	05:35 44 18:57 (T22)
	17:18	17:58	44 17:00 (T26)	19:31	20:05	20:37	27 19:26 (T22)	20:52 44 19:41 (T22)	
29	07:28		07:00	06:09	05:38	05:36	05:36	18:58 (T22)	05:36 43 18:57 (T22)
	17:20		07:32	20:06	20:37	29 19:27 (T22)	20:52 43 19:40 (T22)		
30	07:27		06:58	06:08	05:37	05:36	05:36	18:56 (T22)	05:36 44 18:56 (T22)
	17:21		07:33	20:07	20:38	32 19:28 (T22)	20:52 44 19:40 (T22)		
31	07:26		06:56	05:37	05:37	05:36	05:36	18:56 (T22)	
	17:22		07:35	20:39	33 19:29 (T22)				
Potential sun hours	293	295	370	401	452	457			
Total, worst case	511	237	1461		198	1274			
Sun reduction	0.39	0.42	0.44		0.55	0.59			
Oper. time red.	1.00	1.00	1.00		1.00	1.00			
Wind dir. red.	0.59	0.64	0.67		0.64	0.64			
Total reduction	0.23	0.27	0.29		0.35	0.38			
Total, real	117	64	425		70	480			

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

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

Project:

Baron_SFA

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10/11/2017 10:32 AM / 92

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4084 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (799)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37	18:57 (T22)	06:02	06:35	07:07	08:22 (T1) 06:43
2	05:37	18:57 (T22)	06:03	06:36	07:08	18:15 (T34) 17:05
3	05:38	18:58 (T22)	06:04	06:37	07:09	08:21 (T1) 06:44
4	05:38	18:59 (T22)	06:05	06:38	07:10	18:10 (T34) 17:03
5	05:39	18:59 (T22)	06:06	06:39	07:11	08:20 (T1) 06:46
6	05:40	19:00 (T22)	06:07	06:40	07:12	17:49 (T26) 17:02
7	05:40	19:00 (T22)	06:08	06:41	07:14	08:20 (T1) 06:47
8	05:41	19:01 (T22)	06:09	06:42	07:15	17:50 (T26) 17:01
9	05:42	19:02 (T22)	06:10	06:43	07:16	08:19 (T1) 06:48
10	05:42	19:02 (T22)	06:11	06:44	07:17	17:49 (T26) 17:00
11	05:43	19:03 (T22)	06:12	06:45	07:18	08:19 (T1) 06:50
12	05:44	19:04 (T22)	06:13	06:46	07:19	17:48 (T26) 16:58
13	05:45	19:05 (T22)	06:15	06:48	07:20	08:18 (T1) 06:51
14	05:45	19:05 (T22)	06:16	06:49	07:22	17:47 (T26) 16:57
15	05:46	19:07 (T22)	06:17	06:50	07:23	08:18 (T1) 06:52
16	05:47	19:08 (T22)	06:18	06:51	07:24	17:46 (T26) 16:56
17	05:48	19:10 (T22)	06:19	06:52	07:25	08:17 (T1) 06:53
18	05:49	19:12 (T22)	06:20	06:53	07:26	17:44 (T26) 16:55
19	05:50	19:13 (T22)	06:21	06:54	07:27	08:17 (T1) 06:55
20	05:50	19:17 (T22)	06:22	06:55	07:29	17:43 (T26) 16:54
21	05:51	19:25 (T22)	06:23	06:56	07:30	08:18 (T1) 06:56
22	05:52	19:25 (T22)	06:24	06:57	07:31	17:39 (T26) 16:52
23	05:53	19:25 (T22)	06:25	06:58	07:32	08:18 (T1) 06:57
24	05:54	19:25 (T22)	06:26	06:59	07:33	17:36 (T26) 16:51
25	05:55	19:25 (T22)	06:27	07:00	07:35	08:18 (T1) 06:58
26	05:56	19:25 (T22)	06:28	07:01	07:36	17:36 (T26) 16:51
27	05:57	19:25 (T22)	06:29	07:02	07:37	08:18 (T1) 06:58
28	05:58	19:25 (T22)	06:31	07:04	07:38	17:36 (T26) 16:51
29	05:59	19:25 (T22)	06:32	07:05	07:40	08:18 (T1) 06:58
30	06:00	19:25 (T22)	06:33	07:06	07:41	17:36 (T26) 16:51
31	06:01	19:25 (T22)	06:34	07:07	07:42	08:18 (T1) 06:58
Potential sun hours	464	431	375	343	294	283
Total, worst case	654		606	1121	103	1286
Sun reduction	0.64		0.53	0.45	0.29	0.28
Oper. time red.	1.00		1.00	1.00	1.00	1.00
Wind dir. red.	0.64		0.67	0.66	0.59	0.59
Total reduction	0.41		0.35	0.29	0.17	0.16
Total, real	268		214	329	17	211

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

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

Baron_SFA

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10/11/2017 10:32 AM / 93

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4085 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (800)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	10:15 (T9) 07:25	06:47	08:00 (T1) 06:54	06:07	05:36
	16:48	7 10:22 (T9) 17:24	18:00	16:56 (T26) 19:36	20:09	20:40
2	07:40	07:24	06:46	08:01 (T1) 06:53	06:05	05:36
	16:49	17:25	18:01	16:57 (T26) 19:37	20:10	20:41
3	07:40	07:23	06:44	08:02 (T1) 06:51	06:04	05:35
	16:50	17:26	18:02	16:56 (T26) 19:38	20:11	20:42
4	07:40	07:22	06:42	08:02 (T1) 06:49	06:03	05:35
	16:51	17:28	18:03	16:56 (T26) 19:39	20:12	20:42
5	07:40	07:21	06:41	08:04 (T1) 06:47	06:01	05:35
	16:52	17:29	18:04	16:56 (T26) 19:40	20:13	20:43
6	07:40	07:20	06:39	08:05 (T1) 06:46	06:00	18:37 (T22) 05:34
	16:52	17:30	18:06	16:55 (T26) 19:41	20:14	18:52 (T22) 20:44
7	07:40	07:19	06:38	08:06 (T1) 06:44	05:59	18:34 (T22) 05:34
	16:53	17:31	18:07	16:53 (T26) 19:43	20:15	21 18:55 (T22) 20:44
8	07:40	07:17	07:36	09:09 (T1) 06:42	05:58	18:32 (T22) 05:34
	16:55	17:33	19:08	17:52 (T26) 19:44	20:16	26 18:58 (T22) 20:45
9	07:40	07:16	07:34	17:26 (T26) 06:41	05:56	18:30 (T22) 05:33
	16:56	17:34	19:09	17:51 (T26) 19:45	20:17	30 19:00 (T22) 20:46
10	07:40	07:15	07:32	17:27 (T26) 06:39	05:55	18:29 (T22) 05:33
	16:57	17:35	19:10	17:49 (T26) 19:46	20:19	32 19:01 (T22) 20:46
11	07:39	07:14	08:16 (T1) 07:31	17:29 (T26) 06:37	05:54	18:27 (T22) 05:33
	16:58	17:37	9 08:25 (T1) 19:12	17:47 (T26) 19:47	20:20	36 19:03 (T22) 20:47
12	07:39	07:12	08:12 (T1) 07:29	17:32 (T26) 06:36	05:53	18:26 (T22) 05:33
	16:59	17:38	17 08:29 (T1) 19:13	17:44 (T26) 19:48	20:21	38 19:04 (T22) 20:47
13	07:39	07:11	08:09 (T1) 07:27	06:34	05:52	18:25 (T22) 05:33
	17:00	17:39	22 08:31 (T1) 19:14	19:49	20:22	40 19:05 (T22) 20:48
14	07:38	07:10	08:08 (T1) 07:26	06:32	05:51	18:24 (T22) 05:33
	17:01	17:41	25 08:33 (T1) 19:15	19:50	20:23	42 19:06 (T22) 20:48
15	07:38	07:08	08:07 (T1) 07:24	06:31	05:50	18:23 (T22) 05:33
	17:02	17:42	28 08:35 (T1) 19:16	19:52	20:24	44 19:07 (T22) 20:49
16	07:38	07:07	08:05 (T1) 07:22	06:29	05:49	18:23 (T22) 05:33
	17:03	17:43	30 08:35 (T1) 19:17	19:53	20:25	45 19:08 (T22) 20:49
17	07:37	07:06	08:04 (T1) 07:20	06:28	05:48	18:22 (T22) 05:33
	17:05	17:44	33 08:37 (T1) 19:19	19:54	20:26	46 19:08 (T22) 20:50
18	07:36	07:04	08:03 (T1) 07:19	06:26	05:47	18:21 (T22) 05:33
	17:06	17:46	34 08:37 (T1) 19:20	19:55	20:27	48 19:09 (T22) 20:50
19	07:36	07:03	08:02 (T1) 07:17	06:24	05:46	18:21 (T22) 05:33
	17:07	17:47	42 16:44 (T26) 19:21	19:56	20:28	48 19:09 (T22) 20:50
20	07:35	07:01	08:01 (T1) 07:15	06:23	05:45	18:20 (T22) 05:33
	17:08	17:48	52 16:48 (T26) 19:22	19:57	20:29	50 19:10 (T22) 20:51
21	07:35	07:00	08:01 (T1) 07:14	06:21	05:44	18:20 (T22) 05:33
	17:09	17:50	58 16:51 (T26) 19:23	19:58	20:30	50 19:10 (T22) 20:51
22	07:34	06:58	08:00 (T1) 07:12	06:20	05:43	18:20 (T22) 05:33
	17:11	17:51	62 16:52 (T26) 19:24	20:00	20:31	51 19:11 (T22) 20:51
23	07:33	06:57	08:00 (T1) 07:10	06:18	05:42	18:20 (T22) 05:34
	17:12	17:52	65 16:54 (T26) 19:26	20:00	20:32	51 19:11 (T22) 20:51
24	07:32	06:55	08:00 (T1) 07:08	06:17	05:41	18:20 (T22) 05:34
	17:13	17:53	67 16:54 (T26) 19:27	20:01	20:33	51 19:11 (T22) 20:52
25	07:32	06:54	08:00 (T1) 07:07	06:15	05:41	18:19 (T22) 05:34
	17:15	17:55	69 16:56 (T26) 19:28	20:02	20:34	52 19:11 (T22) 20:52
26	07:31	06:52	08:00 (T1) 07:05	06:14	05:40	18:20 (T22) 05:35
	17:16	17:56	70 16:56 (T26) 19:29	20:03	20:35	52 19:12 (T22) 20:52
27	07:30	06:51	07:59 (T1) 07:03	06:12	05:39	18:19 (T22) 05:35
	17:17	17:57	71 16:56 (T26) 19:30	20:04	20:36	53 19:12 (T22) 20:52
28	07:29	06:49	08:00 (T1) 07:01	06:11	05:39	18:20 (T22) 05:35
	17:18	17:58	70 16:57 (T26) 19:31	20:05	20:37	53 19:13 (T22) 20:52
29	07:28		07:00	06:09	05:38	18:20 (T22) 05:36
	17:20		19:32	20:06	20:37	53 19:13 (T22) 20:52
30	07:27		06:58	06:08	05:37	18:19 (T22) 05:36
	17:21		19:33	20:07	20:38	54 19:13 (T22) 20:52
31	07:26		06:56		05:37	18:20 (T22)
	17:22		19:35		20:39	54 19:14 (T22)
Potential sun hours	293	295	370	401	452	457
Total, worst case	7	824	551		1135	1606
Sun reduction	0.39	0.42	0.44		0.55	0.59
Oper. time red.	1.00	1.00	1.00		1.00	1.00
Wind dir. red.	0.59	0.65	0.67		0.65	0.65
Total reduction	0.23	0.27	0.29		0.36	0.38
Total, real	2	224	162		406	616

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

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

Project:
Baron_SFA

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10/11/2017 10:32 AM / 94
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4085 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (800)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Assumptions for shadow calculations

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December	
1 05:37	18:26 (T22) 06:02	18:36 (T22) 06:35	07:07	17:13 (T26) 06:43	07:20	
20:52	54 19:20 (T22) 20:32	37 19:13 (T22) 19:46	18:53	8 17:21 (T26) 17:05	16:39	
2 05:37	18:26 (T22) 06:03	18:37 (T22) 06:36	07:08	17:09 (T26) 06:45	07:21	
20:52	54 19:20 (T22) 20:31	35 19:12 (T22) 19:44	18:52	15 17:24 (T26) 17:03	16:39	
3 05:38	18:27 (T22) 06:04	18:39 (T22) 06:37	07:09	17:06 (T26) 06:46	07:22	
20:52	53 19:20 (T22) 20:30	32 19:11 (T22) 19:43	18:50	20 17:26 (T26) 17:02	16:38	
4 05:38	18:27 (T22) 06:05	18:40 (T22) 06:38	07:10	17:04 (T26) 06:47	07:23	
20:51	54 19:21 (T22) 20:29	29 19:09 (T22) 19:41	18:48	24 17:28 (T26) 17:01	16:38	
5 05:39	18:27 (T22) 06:06	18:42 (T22) 06:39	07:11	08:49 (T1) 06:48	07:24	
20:51	54 19:21 (T22) 20:28	25 19:07 (T22) 19:39	18:46	35 17:29 (T26) 17:00	16:38	
6 05:40	18:27 (T22) 06:07	18:45 (T22) 06:40	07:12	08:44 (T1) 06:50	07:25	
20:51	54 19:21 (T22) 20:26	19 19:04 (T22) 19:37	18:45	47 17:30 (T26) 16:58	16:38	
7 05:40	18:27 (T22) 06:08	18:49 (T22) 06:41	07:14	08:41 (T1) 06:51	07:26	
20:51	54 19:21 (T22) 20:25	11 19:00 (T22) 19:36	18:43	53 17:30 (T26) 16:57	16:38	
8 05:41	18:27 (T22) 06:09	06:42	07:15	08:39 (T1) 06:52	07:27	
20:50	54 19:21 (T22) 20:24	19 19:34	18:41	58 17:30 (T26) 16:56	16:38	
9 05:42	18:28 (T22) 06:10	06:43	07:16	08:37 (T1) 06:53	07:28	
20:50	54 19:22 (T22) 20:23	19 19:32	18:40	62 17:30 (T26) 16:55	16:38	
10 05:42	18:27 (T22) 06:11	06:44	07:17	08:36 (T1) 06:55	07:29	
20:50	54 19:21 (T22) 20:21	19 19:30	18:38	65 17:30 (T26) 16:54	16:38	
11 05:43	18:28 (T22) 06:12	06:45	07:18	08:36 (T1) 06:56	07:30	
20:49	54 19:22 (T22) 20:20	19 19:29	18:36	67 17:31 (T26) 16:53	16:38	
12 05:44	18:28 (T22) 06:13	06:46	07:19	08:34 (T1) 06:57	07:30	
20:49	54 19:22 (T22) 20:19	19 19:27	18:35	69 17:30 (T26) 16:52	16:38	
13 05:45	18:29 (T22) 06:15	06:48	07:20	08:33 (T1) 06:58	07:31	
20:48	53 19:22 (T22) 20:17	19 19:25	18:33	71 17:30 (T26) 16:51	16:38	
14 05:45	18:28 (T22) 06:16	06:49	07:22	08:32 (T1) 07:00	07:32	
20:48	53 19:21 (T22) 20:16	19 19:23	18:31	71 17:29 (T26) 16:50	16:38	
15 05:46	18:28 (T22) 06:17	06:50	07:23	08:32 (T1) 07:01	07:33	
20:47	54 19:22 (T22) 20:14	19 19:22	18:30	70 17:28 (T26) 16:49	16:38	
16 05:47	18:29 (T22) 06:18	06:51	07:24	08:32 (T1) 07:02	07:33	
20:46	53 19:22 (T22) 20:13	19 19:20	18:28	70 17:28 (T26) 16:48	16:38	
17 05:48	18:29 (T22) 06:19	06:52	07:25	08:32 (T1) 07:03	07:34	
20:46	53 19:22 (T22) 20:11	19 19:18	18:27	69 17:27 (T26) 16:47	16:39	
18 05:49	18:30 (T22) 06:20	06:53	07:26	08:31 (T1) 07:05	07:35	
20:45	52 19:22 (T22) 20:10	19 19:16	18:25	66 17:25 (T26) 16:46	16:39	
19 05:50	18:29 (T22) 06:21	06:54	07:27	08:31 (T1) 07:06	07:35	
20:44	52 19:21 (T22) 20:09	19 19:15	18:23	64 17:24 (T26) 16:46	16:39	
20 05:50	18:29 (T22) 06:22	06:55	07:29	08:32 (T1) 07:07	07:36	
20:44	52 19:21 (T22) 20:07	19 19:13	18:22	60 17:23 (T26) 16:45	16:40	
21 05:51	18:30 (T22) 06:23	06:56	07:30	08:32 (T1) 07:08	07:37	
20:43	51 19:21 (T22) 20:05	19 19:11	18:20	56 17:21 (T26) 16:44	16:40	
22 05:52	18:30 (T22) 06:24	06:57	07:31	08:32 (T1) 07:09	07:37	
20:42	51 19:21 (T22) 20:04	19 19:09	18:19	50 17:17 (T26) 16:43	16:41	
23 05:53	18:31 (T22) 06:25	06:58	07:32	08:32 (T1) 07:11	07:38	
20:41	49 19:20 (T22) 20:02	19 19:07	18:17	36 09:08 (T1) 16:43	16:41	
24 05:54	18:31 (T22) 06:26	06:59	07:33	08:33 (T1) 07:12	07:38	
20:40	49 19:20 (T22) 20:01	19 19:06	18:16	35 09:08 (T1) 16:42	16:42	
25 05:55	18:32 (T22) 06:27	07:00	07:35	08:34 (T1) 07:13	07:38	
20:39	48 19:20 (T22) 19:58	19 19:04	18:14	32 09:06 (T1) 16:42	16:43	
26 05:56	18:32 (T22) 06:28	07:01	07:36	08:35 (T1) 07:14	07:39	
20:39	47 19:19 (T22) 19:56	19 19:02	18:13	30 09:05 (T1) 16:41	16:43	
27 05:57	18:33 (T22) 06:29	07:02	07:37	08:37 (T1) 07:15	07:39	
20:38	46 19:19 (T22) 19:54	19 19:00	18:11	27 09:04 (T1) 16:41	16:44	
28 05:58	18:34 (T22) 06:31	07:04	07:38	08:38 (T1) 07:16	07:39	
20:37	44 19:18 (T22) 19:53	18 18:59	18:10	24 09:02 (T1) 16:40	16:45	
29 05:59	18:34 (T22) 06:32	07:05	07:40	08:39 (T1) 07:18	07:40	
20:36	43 19:17 (T22) 19:51	18 18:57	18:09	21 09:00 (T1) 16:40	16:45	
30 06:00	18:35 (T22) 06:33	07:06	07:41	08:42 (T1) 07:19	07:40	
20:35	41 19:16 (T22) 19:49	18 18:55	18:07	15 08:57 (T1) 16:39	16:46	
31 06:01	18:36 (T22) 06:34	07:07	07:42	08:47 (T1) 07:20	07:40	
20:33	39 19:15 (T22) 19:48	18 18:06	18:06	6 08:53 (T1) 16:47	16:47	
Potential sun hours	464	431	375	343	294	283
Total, worst case	1577	188	1396	1396	355	355
Sun reduction	0.64	0.91	0.45	0.45	0.28	0.28
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.65	0.65	0.66	0.66	0.59	0.59
Total reduction	0.42	0.59	0.29	0.29	0.16	0.16
Total, real	656	111	411	411	58	58

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

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

Project: Baron_SFA

Printed/Page: 10/11/2017 10:32 AM / 95

Licensed user: EDR 217 Montgomery St. US-SYRACUSE, NY 13202 (315) 471 0688

Calculated: 10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4448 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (844)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Table with 12 columns (Jan-Dec) and 1 row of values: 0.39, 0.42, 0.44, 0.51, 0.55, 0.59, 0.64, 0.91, 0.53, 0.45, 0.29, 0.28

Operational time

Table with 13 columns (N-Sum) and 1 row of values: 210, 144, 244, 226, 221, 198, 388, 456, 848, 816, 949, 930, 1,255, 1,162, 542, 171, 8,760

Main shadow calculation table with columns for months (January-June) and rows for each day (1-31) showing start and end times.

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

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

Project:

Baron_SFA

Printed/Page

10/11/2017 10:32 AM / 96

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4448 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (844)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December	
1	05:37	06:07 (T43) 06:02	06:24 (T43) 06:35	07:16 (T19) 07:07	06:43	07:05 (T8) 07:20	
2	05:37	69 19:37 (T9) 20:32	71 19:46 (T9) 19:46	18 07:34 (T19) 18:53	26 17:05	07:31 (T8) 16:39	
3	05:38	06:06 (T43) 06:03	06:25 (T43) 06:36	07:14 (T19) 07:08	06:44	07:06 (T8) 07:21	
4	05:38	71 19:37 (T9) 20:31	69 19:46 (T9) 19:44	22 07:36 (T19) 18:52	17:03	07:30 (T8) 16:39	
5	05:38	06:06 (T43) 06:04	06:26 (T43) 06:37	07:12 (T19) 07:09	06:46	07:08 (T8) 07:22	
6	05:38	73 19:38 (T9) 20:30	67 19:45 (T9) 19:43	25 07:37 (T19) 18:50	17:02	07:30 (T8) 16:38	
7	05:38	06:07 (T43) 06:05	06:27 (T43) 06:38	07:10 (T19) 07:10	06:47	07:09 (T8) 07:23	
8	05:41	73 19:39 (T9) 20:29	65 19:45 (T9) 19:41	28 07:38 (T19) 18:48	17:01	07:29 (T8) 16:38	
9	05:41	06:06 (T43) 06:06	06:28 (T43) 06:39	07:08 (T19) 07:11	06:48	07:10 (T8) 07:24	
10	05:41	75 19:39 (T9) 20:28	63 19:45 (T9) 19:39	31 07:39 (T19) 18:46	17:00	07:27 (T8) 16:38	
11	05:41	06:06 (T43) 06:07	06:29 (T43) 06:40	07:07 (T19) 07:12	06:49	07:12 (T8) 07:25	
12	05:41	76 19:40 (T9) 20:26	59 19:44 (T9) 19:37	33 07:40 (T19) 18:45	16:58	07:27 (T8) 16:38	
13	05:41	06:06 (T43) 06:08	06:30 (T43) 06:41	07:06 (T19) 07:14	06:51	07:13 (T8) 07:26	
14	05:41	77 19:40 (T9) 20:25	56 19:44 (T9) 19:36	34 07:40 (T19) 18:43	16:57	07:25 (T8) 16:38	
15	05:41	06:06 (T43) 06:09	06:31 (T43) 06:42	07:05 (T19) 07:15	06:52	07:14 (T8) 07:27	
16	05:42	77 19:40 (T9) 20:24	52 19:43 (T9) 19:34	35 07:40 (T19) 18:41	16:56	8 07:22 (T8) 16:38	
17	05:42	06:06 (T43) 06:10	18:53 (T9) 06:43	07:05 (T19) 07:16	06:53	07:16 (T8) 07:28	
18	05:42	79 19:41 (T9) 20:23	49 19:42 (T9) 19:32	35 07:40 (T19) 18:40	16:55	4 07:20 (T8) 16:38	
19	05:42	06:05 (T43) 06:11	18:54 (T9) 06:44	07:05 (T19) 07:17	06:54	07:29	
20	05:42	81 19:41 (T9) 20:21	47 19:41 (T9) 19:30	35 07:40 (T19) 18:38	16:54	16:38	
21	05:43	06:06 (T43) 06:12	18:55 (T9) 06:45	07:06 (T19) 07:18	06:56	07:29	
22	05:43	81 19:42 (T9) 20:20	45 19:40 (T9) 19:29	34 07:40 (T19) 18:36	16:53	16:38	
23	05:44	06:07 (T43) 06:13	18:55 (T9) 06:46	07:07 (T19) 07:19	06:57	07:30	
24	05:44	82 19:43 (T9) 20:19	44 19:39 (T9) 19:27	33 07:40 (T19) 18:35	15 08:23 (T8) 16:52	16:38	
25	05:44	06:08 (T43) 06:15	18:56 (T9) 06:47	07:08 (T19) 07:20	08:05 (T8) 06:58	07:31	
26	05:44	82 19:43 (T9) 20:17	42 19:38 (T9) 19:25	31 07:39 (T19) 18:33	21 08:26 (T8) 16:51	16:38	
27	05:45	06:08 (T43) 06:16	18:58 (T9) 06:49	07:09 (T19) 07:21	08:02 (T8) 06:59	07:32	
28	05:45	82 19:43 (T9) 20:16	40 19:38 (T9) 19:23	29 07:38 (T19) 18:31	25 08:27 (T8) 16:50	16:38	
29	05:46	06:09 (T43) 06:17	18:59 (T9) 06:50	07:10 (T19) 07:23	08:00 (T8) 07:01	07:33	
30	05:46	83 19:44 (T9) 20:14	37 19:36 (T9) 19:22	28 07:38 (T19) 18:30	29 08:29 (T8) 16:49	16:38	
31	05:47	06:10 (T43) 06:18	19:00 (T9) 06:51	07:11 (T19) 07:24	07:59 (T8) 07:02	07:33	
32	05:47	82 19:44 (T9) 20:13	35 19:35 (T9) 19:20	26 07:37 (T19) 18:28	32 08:31 (T8) 16:48	16:38	
33	05:48	06:11 (T43) 06:19	19:02 (T9) 06:52	07:12 (T19) 07:25	07:58 (T8) 07:03	07:34	
34	05:48	83 19:45 (T9) 20:11	31 19:33 (T9) 19:18	24 07:36 (T19) 18:26	33 08:31 (T8) 16:47	16:39	
35	05:49	06:12 (T43) 06:20	19:04 (T9) 06:53	07:13 (T19) 07:26	07:56 (T8) 07:04	07:35	
36	05:49	82 19:45 (T9) 20:10	26 19:30 (T9) 19:16	21 07:34 (T19) 18:25	36 08:32 (T8) 16:46	16:39	
37	05:49	06:12 (T43) 06:21	19:06 (T9) 06:54	07:14 (T19) 07:27	07:55 (T8) 07:06	07:35	
38	05:49	83 19:45 (T9) 20:08	21 19:27 (T9) 19:15	19 07:33 (T19) 18:23	37 08:32 (T8) 16:46	16:39	
39	05:50	06:13 (T43) 06:22	19:10 (T9) 06:55	07:15 (T19) 07:29	07:54 (T8) 07:07	07:36	
40	05:50	82 19:45 (T9) 20:07	13 19:23 (T9) 19:13	16 07:31 (T19) 18:22	39 08:33 (T8) 16:45	16:40	
41	05:51	06:14 (T43) 06:23	19:11 (T9) 06:56	07:16 (T19) 07:30	07:54 (T8) 07:08	07:36	
42	05:51	82 19:46 (T9) 20:05	13 19:11 (T9) 19:01	13 07:29 (T19) 18:20	40 08:34 (T8) 16:44	16:40	
43	05:52	06:15 (T43) 06:24	19:12 (T9) 06:57	07:17 (T19) 07:31	07:54 (T8) 07:09	07:37	
44	05:52	82 19:46 (T9) 20:04	9 19:09 (T9) 19:00	9 07:26 (T19) 18:19	40 08:34 (T8) 16:43	16:41	
45	05:53	06:16 (T43) 06:25	19:13 (T9) 06:58	07:18 (T19) 07:32	07:53 (T8) 07:11	07:37	
46	05:53	81 19:46 (T9) 20:02	19:07 (T9) 06:59	3 07:21 (T19) 18:17	41 08:34 (T8) 16:43	16:41	
47	05:54	06:17 (T43) 06:26	19:08 (T9) 07:00	07:33 (T19) 18:18	07:55 (T8) 07:12	07:38	
48	05:54	80 19:46 (T9) 20:01	19:06 (T9) 07:01	18:16 (T19) 18:16	39 08:34 (T8) 16:42	16:42	
49	05:55	06:18 (T43) 06:27	19:04 (T9) 07:02	07:35 (T19) 18:17	07:56 (T8) 07:13	07:38	
50	05:55	80 19:47 (T9) 19:58	19:04 (T9) 07:03	18:14 (T19) 18:14	38 08:34 (T8) 16:42	16:42	
51	05:56	06:19 (T43) 06:28	19:01 (T9) 07:04	07:36 (T19) 18:15	07:57 (T8) 07:14	07:39	
52	05:56	80 19:47 (T9) 19:56	19:02 (T9) 07:05	18:13 (T19) 18:13	37 08:34 (T8) 16:41	16:43	
53	05:57	06:20 (T43) 06:29	19:00 (T9) 07:06	07:37 (T19) 18:16	07:58 (T8) 07:15	07:39	
54	05:57	79 19:47 (T9) 19:54	19:00 (T9) 07:07	18:11 (T19) 18:11	35 08:33 (T8) 16:41	16:44	
55	05:58	06:21 (T43) 06:31	18:59 (T9) 07:08	07:38 (T19) 18:17	08:00 (T8) 07:16	07:39	
56	05:58	78 19:47 (T9) 19:53	18:59 (T9) 07:09	18:10 (T19) 18:10	34 08:34 (T8) 16:40	16:44	
57	05:59	06:22 (T43) 06:32	19:00 (T9) 07:10	07:39 (T19) 18:18	08:01 (T8) 07:17	07:40	
58	05:59	76 19:47 (T9) 19:51	18:57 (T9) 07:11	18:09 (T19) 18:09	32 08:33 (T8) 16:40	16:45	
59	06:00	06:23 (T43) 06:33	19:01 (T9) 07:12	07:41 (T19) 18:19	08:02 (T8) 07:19	07:40	
60	06:00	75 19:47 (T9) 19:49	18:55 (T9) 07:13	18:07 (T19) 18:07	30 08:32 (T8) 16:39	16:46	
61	06:01	06:23 (T43) 06:34	07:19 (T19) 18:20	07:42 (T19) 18:20	08:04 (T8) 16:40	07:40	
62	06:01	74 19:46 (T9) 19:48	13 07:32 (T19) 18:21	18:06 (T19) 18:06	28 08:32 (T8) 16:41	16:47	
63	06:02	464	431	375	343	294	283
64	Potential sun hours	464	431	375	343	294	283
65	Total, worst case	2440	945	582	661	148	
66	Sun reduction	0.64	0.91	0.53	0.45	0.29	
67	Oper. time red.	1.00	1.00	1.00	1.00	1.00	
68	Wind dir. red.	0.67	0.66	0.67	0.64	0.64	
69	Total reduction	0.43	0.60	0.36	0.29	0.19	
70	Total, real	1041	563	208	191	28	

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

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

Project:
Baron_SFA

Printed/Page
10/11/2017 10:32 AM / 97

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4449 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (845)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	07:25	16:13 (T73) 06:47	16:22 (T73) 06:55	06:07	19:10 (T77) 05:37
	16:48	17:24	46 16:59 (T73) 18:00	53 17:37 (T85) 19:36	20:09	36 19:46 (T77) 20:40
2	07:40	07:24	16:12 (T73) 06:46	16:25 (T73) 06:53	06:06	19:10 (T77) 05:36
	16:49	17:25	49 17:01 (T73) 18:01	50 17:39 (T85) 19:37	20:10	37 19:47 (T77) 20:41
3	07:40	07:23	16:12 (T73) 06:44	16:27 (T73) 06:51	06:04	19:09 (T77) 05:36
	16:50	17:27	50 17:02 (T73) 18:02	46 17:40 (T85) 19:38	20:11	39 19:48 (T77) 20:41
4	07:40	07:22	16:11 (T73) 06:43	16:32 (T73) 06:49	06:03	19:09 (T77) 05:35
	16:51	17:28	53 17:04 (T73) 18:03	36 17:41 (T85) 19:39	20:12	40 19:49 (T77) 20:42
5	07:40	07:21	16:11 (T73) 06:41	17:16 (T85) 06:48	06:02	19:09 (T77) 05:35
	16:52	17:29	54 17:05 (T73) 18:05	27 17:43 (T85) 19:40	20:13	41 19:50 (T77) 20:43
6	07:40	07:20	16:10 (T73) 06:39	17:16 (T85) 06:46	06:00	19:09 (T77) 05:35
	16:53	17:31	55 17:05 (T73) 18:06	26 17:42 (T85) 19:42	20:14	42 19:51 (T77) 20:44
7	07:40	07:19	16:10 (T73) 06:38	17:16 (T85) 06:44	05:59	19:10 (T77) 05:34
	16:54	17:32	55 17:05 (T73) 18:07	24 17:40 (T85) 19:43	20:15	43 19:53 (T77) 20:44
8	07:40	07:17	16:10 (T73) 07:36	18:18 (T85) 06:43	05:58	19:09 (T77) 05:34
	16:55	17:33	56 17:06 (T73) 19:08	21 18:39 (T85) 19:44	20:16	44 19:53 (T77) 20:45
9	07:40	07:16	16:10 (T73) 07:34	18:20 (T85) 06:41	05:57	19:09 (T77) 05:34
	16:56	17:34	57 17:07 (T73) 19:09	17 18:37 (T85) 19:45	20:17	44 19:53 (T77) 20:46
10	07:40	07:15	16:09 (T73) 07:33	18:22 (T85) 06:39	05:56	19:09 (T77) 05:34
	16:57	17:36	57 17:06 (T73) 19:11	11 18:33 (T85) 19:46	20:19	44 19:53 (T77) 20:46
11	07:39	07:14	16:10 (T73) 07:31	06:38	05:54	19:10 (T77) 05:33
	16:58	17:37	57 17:07 (T73) 19:12	19:47	20:20	42 19:52 (T77) 20:47
12	07:39	07:12	16:10 (T73) 07:29	06:36	05:53	19:10 (T77) 05:33
	16:59	17:38	57 17:07 (T73) 19:13	19:48	20:21	42 19:52 (T77) 20:47
13	07:39	07:11	16:09 (T73) 07:28	06:34	05:52	19:11 (T77) 05:33
	17:00	17:40	58 17:07 (T73) 19:14	19:49	20:22	41 19:52 (T77) 20:48
14	07:38	16:33 (T82) 07:10	16:10 (T73) 07:26	06:33	05:51	19:11 (T77) 05:33
	17:01	2 16:35 (T82) 17:41	57 17:07 (T73) 19:15	19:51	20:23	40 19:51 (T77) 20:48
15	07:38	16:32 (T82) 07:08	16:10 (T73) 07:24	06:31	05:50	19:12 (T77) 05:33
	17:03	4 16:36 (T82) 17:42	57 17:07 (T73) 19:16	19:52	20:24	39 19:51 (T77) 20:49
16	07:37	16:31 (T82) 07:07	16:10 (T73) 07:22	06:29	05:49	19:12 (T77) 05:33
	17:04	6 16:37 (T82) 17:43	56 17:06 (T73) 19:18	19:53	20:25	38 19:50 (T77) 20:49
17	07:37	16:31 (T82) 07:06	16:11 (T73) 07:21	06:28	05:48	19:13 (T77) 05:33
	17:05	8 16:39 (T82) 17:45	56 17:07 (T73) 19:19	19:54	20:26	36 19:49 (T77) 20:50
18	07:36	16:31 (T82) 07:04	16:10 (T73) 07:19	06:26	05:47	19:13 (T77) 05:33
	17:06	9 16:40 (T82) 17:46	56 17:06 (T73) 19:20	19:55	20:27	36 19:49 (T77) 20:50
19	07:36	16:31 (T82) 07:03	16:11 (T73) 07:17	06:25	19:27 (T77) 05:46	19:14 (T77) 05:33
	17:07	11 16:42 (T82) 17:47	55 17:06 (T73) 19:21	19:56	6 19:33 (T77) 20:28	34 19:48 (T77) 20:50
20	07:35	16:28 (T73) 07:01	16:11 (T73) 07:15	06:23	19:24 (T77) 05:45	19:16 (T77) 05:33
	17:09	15 16:43 (T82) 17:49	54 17:05 (T73) 19:22	19:57	11 19:35 (T77) 20:29	32 19:48 (T77) 20:51
21	07:35	16:25 (T73) 07:00	16:12 (T73) 07:14	06:22	19:21 (T77) 05:44	19:16 (T77) 05:34
	17:10	19 16:44 (T73) 17:50	57 17:27 (T85) 19:23	19:58	14 19:35 (T77) 20:30	31 19:47 (T77) 20:51
22	07:34	16:23 (T73) 06:58	16:13 (T73) 07:12	06:20	19:19 (T77) 05:43	19:17 (T77) 05:34
	17:11	22 16:45 (T73) 17:51	58 17:28 (T85) 19:25	20:00	18 19:37 (T77) 20:31	29 19:46 (T77) 20:51
23	07:33	16:22 (T73) 06:57	16:14 (T73) 07:10	06:19	19:17 (T77) 05:43	19:18 (T77) 05:34
	17:12	25 16:47 (T73) 17:52	60 17:30 (T85) 19:26	20:00	20 19:37 (T77) 20:32	27 19:45 (T77) 20:51
24	07:32	16:20 (T73) 06:55	16:14 (T73) 07:08	06:17	19:16 (T77) 05:42	19:19 (T77) 05:34
	17:14	28 16:48 (T73) 17:54	60 17:31 (T85) 19:27	20:01	23 19:39 (T77) 20:33	24 19:43 (T77) 20:52
25	07:32	16:19 (T73) 06:54	16:16 (T73) 07:07	06:16	19:14 (T77) 05:41	19:21 (T77) 05:35
	17:15	30 16:49 (T73) 17:55	61 17:33 (T85) 19:28	20:02	25 19:39 (T77) 20:34	22 19:43 (T77) 20:52
26	07:31	16:17 (T73) 06:52	16:17 (T73) 07:05	06:14	19:14 (T77) 05:40	19:22 (T77) 05:35
	17:16	34 16:51 (T73) 17:56	60 17:34 (T85) 19:29	20:03	27 19:41 (T77) 20:35	19 19:41 (T77) 20:52
27	07:30	16:16 (T73) 06:51	16:18 (T73) 07:03	06:13	19:12 (T77) 05:40	19:25 (T77) 05:35
	17:17	36 16:52 (T73) 17:57	59 17:35 (T85) 19:30	20:04	29 19:41 (T77) 20:36	15 19:40 (T77) 20:52
28	07:29	16:15 (T73) 06:49	16:20 (T73) 07:02	06:11	19:12 (T77) 05:39	19:27 (T77) 05:36
	17:19	38 16:53 (T73) 17:59	57 17:36 (T85) 19:31	20:05	31 19:43 (T77) 20:36	11 19:38 (T77) 20:52
29	07:28	16:15 (T73)	07:00	06:10	19:11 (T77) 05:38	19:31 (T77) 05:36
	17:20	40 16:55 (T73)	19:33	20:06	33 19:44 (T77) 20:37	2 19:33 (T77) 20:52
30	07:27	16:14 (T73)	06:58	06:08	19:10 (T77) 05:38	05:37
	17:21	42 16:56 (T73)	19:34	20:07	35 19:45 (T77) 20:38	20:52
31	07:26	16:13 (T73)	06:56	06:07	05:37	
	17:23	45 16:58 (T73)	19:35	20:08	20:39	
Potential sun hours	294	295	370	401	452	457
Total, worst case	414	1567	311	272	970	
Sun reduction	0.39	0.42	0.44	0.51	0.55	
Oper. time red.	1.00	1.00	1.00	1.00	1.00	
Wind dir. red.	0.69	0.69	0.68	0.65	0.65	
Total reduction	0.27	0.29	0.30	0.33	0.36	
Total, real	113	460	94	91	350	

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

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

Project:
Baron_SFA

Printed/Page
10/11/2017 10:32 AM / 98

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4449 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (845)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December		
1 05:37	06:02	19:21 (T77) 06:35	07:07	06:43	15:39 (T73) 07:20		
20:52	20:32	42 20:03 (T77) 19:46	18:54	57	17:05 16:36 (T73) 16:39		
2 05:38	06:03	19:20 (T77) 06:36	07:08	06:45	15:39 (T73) 07:21		
20:52	20:31	43 20:03 (T77) 19:44	18:52	56	17:04 16:35 (T73) 16:39		
3 05:38	06:04	19:20 (T77) 06:37	07:09	18:03 (T85) 06:46	15:40 (T73) 07:22		
20:52	20:30	43 20:03 (T77) 19:43	18:50	7	18:10 (T85) 17:02	56	16:36 (T73) 16:39
4 05:39	06:05	19:20 (T77) 06:38	07:10	17:58 (T85) 06:47	15:40 (T73) 07:23		
20:51	20:29	44 20:04 (T77) 19:41	18:48	15	18:13 (T85) 17:01	55	16:35 (T73) 16:39
5 05:39	06:06	19:19 (T77) 06:39	07:11	17:56 (T85) 06:48	15:40 (T73) 07:24		
20:51	20:28	44 20:03 (T77) 19:39	18:47	19	18:15 (T85) 17:00	54	16:34 (T73) 16:38
6 05:40	06:08	19:19 (T77) 06:40	07:13	17:54 (T85) 06:50	15:41 (T73) 07:25		
20:51	20:26	43 20:02 (T77) 19:38	18:45	22	18:16 (T85) 16:59	54	16:35 (T73) 16:38
7 05:41	06:09	19:19 (T77) 06:41	07:14	17:52 (T85) 06:51	15:41 (T73) 07:26		
20:51	20:25	42 20:01 (T77) 19:36	18:43	25	18:17 (T85) 16:58	52	16:33 (T73) 16:38
8 05:41	06:10	19:19 (T77) 06:42	07:15	17:51 (T85) 06:52	15:42 (T73) 07:27		
20:50	20:24	40 19:59 (T77) 19:34	18:42	26	18:17 (T85) 16:57	50	16:32 (T73) 16:38
9 05:42	06:11	19:19 (T77) 06:44	07:16	17:50 (T85) 06:53	15:43 (T73) 07:28		
20:50	20:23	39 19:58 (T77) 19:32	18:40	27	18:17 (T85) 16:55	48	16:31 (T73) 16:38
10 05:43	06:12	19:19 (T77) 06:45	07:17	17:05 (T73) 06:55	15:44 (T73) 07:29		
20:49	20:21	38 19:57 (T77) 19:31	18:38	41	18:16 (T85) 16:54	46	16:30 (T73) 16:38
11 05:43	06:13	19:19 (T77) 06:46	07:18	17:00 (T73) 06:56	15:45 (T73) 07:29		
20:49	20:20	37 19:56 (T77) 19:29	18:37	49	18:14 (T85) 16:53	44	16:29 (T73) 16:38
12 05:44	06:14	19:19 (T77) 06:47	07:19	16:57 (T73) 06:57	15:46 (T73) 07:30		
20:49	20:19	35 19:54 (T77) 19:27	18:35	53	18:12 (T85) 16:52	42	16:28 (T73) 16:38
13 05:45	06:15	19:19 (T77) 06:48	07:20	16:54 (T73) 06:58	15:47 (T73) 07:31		
20:48	20:17	34 19:53 (T77) 19:25	18:33	56	18:10 (T85) 16:51	40	16:27 (T73) 16:38
14 05:46	06:16	19:19 (T77) 06:49	07:22	16:52 (T73) 07:00	15:48 (T73) 07:32		
20:48	20:16	33 19:52 (T77) 19:24	18:32	57	18:08 (T85) 16:50	38	16:26 (T73) 16:38
15 05:47	19:37 (T77) 06:17	19:20 (T77) 06:50	07:23	16:50 (T73) 07:01	15:49 (T73) 07:33		
20:47	9 19:46 (T77) 20:14	30 19:50 (T77) 19:22	18:30	58	18:06 (T85) 16:49	36	16:25 (T73) 16:39
16 05:47	19:34 (T77) 06:18	19:20 (T77) 06:51	07:24	16:49 (T73) 07:02	15:50 (T73) 07:33		
20:46	14 19:48 (T77) 20:13	29 19:49 (T77) 19:20	18:28	60	18:06 (T85) 16:48	34	16:24 (T73) 16:39
17 05:48	19:32 (T77) 06:19	19:21 (T77) 06:52	07:25	16:47 (T73) 07:03	15:52 (T73) 07:34		
20:46	18 19:50 (T77) 20:12	26 19:47 (T77) 19:18	18:27	61	18:04 (T85) 16:48	30	16:22 (T73) 16:39
18 05:49	19:31 (T77) 06:20	19:21 (T77) 06:53	07:26	16:46 (T73) 07:05	15:54 (T73) 07:35		
20:45	21 19:52 (T77) 20:10	25 19:46 (T77) 19:16	18:25	60	18:02 (T85) 16:47	28	16:22 (T73) 16:40
19 05:50	19:30 (T77) 06:21	19:22 (T77) 06:54	07:27	16:44 (T73) 07:06	15:56 (T73) 07:35		
20:44	23 19:53 (T77) 20:09	22 19:44 (T77) 19:15	18:24	60	18:00 (T85) 16:46	25	16:21 (T73) 16:40
20 05:51	19:29 (T77) 06:22	19:23 (T77) 06:55	07:29	16:44 (T73) 07:07	15:58 (T73) 07:36		
20:44	25 19:54 (T77) 20:07	20 19:43 (T77) 19:13	18:22	58	17:59 (T85) 16:45	22	16:20 (T73) 16:40
21 05:52	19:28 (T77) 06:23	19:24 (T77) 06:56	07:30	16:43 (T73) 07:08	16:01 (T73) 07:36		
20:43	28 19:56 (T77) 20:06	17 19:41 (T77) 19:11	18:21	55	17:57 (T85) 16:45	19	16:20 (T73) 16:41
22 05:53	19:26 (T77) 06:24	19:26 (T77) 06:57	07:31	16:42 (T73) 07:09	16:04 (T73) 07:37		
20:42	30 19:56 (T77) 20:04	14 19:40 (T77) 19:09	18:19	53	17:35 (T73) 16:44	15	16:19 (T82) 16:41
23 05:54	19:26 (T77) 06:26	19:28 (T77) 06:58	07:32	16:41 (T73) 07:11	16:07 (T82) 07:37		
20:41	31 19:57 (T77) 20:02	10 19:38 (T77) 19:08	18:18	54	17:35 (T73) 16:43	11	16:18 (T82) 16:42
24 05:54	19:25 (T77) 06:27	19:31 (T77) 06:59	07:33	16:41 (T73) 07:12	16:08 (T82) 07:38		
20:40	33 19:58 (T77) 20:01	6 19:37 (T77) 19:06	18:16	55	17:36 (T73) 16:43	9	16:17 (T82) 16:42
25 05:55	19:24 (T77) 06:28	07:01	07:35	16:40 (T73) 07:13	16:09 (T82) 07:38		
20:39	35 19:59 (T77) 19:58	19:04	18:15	56	17:36 (T73) 16:42	8	16:17 (T82) 16:43
26 05:56	19:24 (T77) 06:29	07:02	07:36	16:39 (T73) 07:14	16:10 (T82) 07:39		
20:39	36 20:00 (T77) 19:56	19:02	18:13	57	17:36 (T73) 16:41	6	16:16 (T82) 16:44
27 05:57	19:23 (T77) 06:30	07:03	07:37	16:40 (T73) 07:15	16:11 (T82) 07:39		
20:38	37 20:00 (T77) 19:54	19:01	18:12	57	17:37 (T73) 16:41	4	16:15 (T82) 16:44
28 05:58	19:23 (T77) 06:31	07:04	07:38	16:39 (T73) 07:16	16:13 (T82) 07:39		
20:37	38 20:01 (T77) 19:53	18:59	18:10	58	17:37 (T73) 16:40	2	16:15 (T82) 16:45
29 05:59	19:22 (T77) 06:32	07:05	07:40	16:39 (T73) 07:18	07:40		
20:36	40 20:02 (T77) 19:51	18:57	18:09	57	17:36 (T73) 16:40	16:46	
30 06:00	19:22 (T77) 06:33	07:06	07:41	16:39 (T73) 07:19	07:40		
20:35	40 20:02 (T77) 19:49	18:55	18:08	57	17:36 (T73) 16:40	16:46	
31 06:01	19:21 (T77) 06:34	07:07	07:42	16:39 (T73)	07:40		
20:33	41 20:02 (T77) 19:48	18:06	57	17:36 (T73)	16:47		
Potential sun hours 463	431	375	343	294	283		
Total, worst case	499	756	1370	941			
Sun reduction	0.64	0.91	0.45	0.29			
Oper. time red.	1.00	1.00	1.00	1.00			
Wind dir. red.	0.65	0.65	0.69	0.69			
Total reduction	0.42	0.60	0.31	0.20			
Total, real	209	451	429	191			

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

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

Project:
Baron_SFA

Printed/Page
10/11/2017 10:32 AM / 99

Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4468 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (853)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	15:15 (T26) 07:25	06:47	15:49 (T22) 06:54	08:16 (T11) 06:07	08:21 (T11) 05:36
	16:48	26 15:41 (T26) 17:24	18:00	29 16:18 (T22) 19:36	56 09:12 (T11) 20:09	23 08:44 (T11) 20:40
2	07:40	15:15 (T26) 07:24	06:46	15:51 (T22) 06:53	08:15 (T11) 06:05	08:23 (T11) 05:36
	16:49	26 15:41 (T26) 17:25	18:01	26 16:17 (T22) 19:37	57 09:12 (T11) 20:10	17 08:40 (T11) 20:41
3	07:40	15:15 (T26) 07:23	06:44	15:53 (T22) 06:51	08:13 (T11) 06:04	08:29 (T11) 05:35
	16:50	27 15:42 (T26) 17:26	18:02	22 16:15 (T22) 19:38	59 09:12 (T11) 20:11	6 08:35 (T11) 20:42
4	07:40	15:15 (T26) 07:22	06:42	15:55 (T22) 06:49	08:13 (T11) 06:03	05:35
	16:51	26 15:41 (T26) 17:28	18:03	17 16:12 (T22) 19:39	60 09:13 (T11) 20:12	20:42
5	07:40	15:15 (T26) 07:21	06:41	16:01 (T22) 06:47	08:12 (T11) 06:01	05:35
	16:52	27 15:42 (T26) 17:29	5 16:06 (T22) 18:04	6 16:07 (T22) 19:40	61 09:13 (T11) 20:13	20:43
6	07:40	15:16 (T26) 07:20	06:39	15:55 (T22) 06:39	06:46	08:11 (T11) 06:00
	16:52	26 15:42 (T26) 17:30	15 16:10 (T22) 18:06	19:41	61 09:12 (T11) 20:14	20:44
7	07:40	15:17 (T26) 07:19	06:38	15:53 (T22) 06:38	06:44	08:10 (T11) 05:59
	16:53	26 15:43 (T26) 17:31	20 16:13 (T22) 18:07	19:43	62 09:12 (T11) 20:15	20:44
8	07:40	15:18 (T26) 07:17	06:36	15:51 (T22) 07:36	06:42	08:10 (T11) 05:58
	16:54	25 15:43 (T26) 17:33	25 16:16 (T22) 19:08	19:44	62 09:12 (T11) 20:16	20:45
9	07:40	15:18 (T26) 07:16	06:34	15:50 (T22) 07:34	06:41	08:10 (T11) 05:56
	16:56	26 15:44 (T26) 17:34	28 16:18 (T22) 19:09	19:45	61 09:11 (T11) 20:17	20:46
10	07:40	15:18 (T26) 07:15	06:32	15:48 (T22) 07:32	06:39	08:09 (T11) 05:55
	16:57	26 15:44 (T26) 17:35	31 16:19 (T22) 19:10	19:46	62 09:11 (T11) 20:19	20:46
11	07:39	15:19 (T26) 07:14	06:31	15:47 (T22) 07:31	06:37	08:09 (T11) 05:54
	16:58	25 15:44 (T26) 17:37	33 16:20 (T22) 19:12	19:47	62 09:11 (T11) 20:20	20:47
12	07:39	15:19 (T26) 07:12	06:29	15:47 (T22) 07:29	06:36	08:09 (T11) 05:53
	16:59	25 15:44 (T26) 17:38	34 16:21 (T22) 19:13	19:48	61 09:10 (T11) 20:21	11 19:26 (T6) 20:47
13	07:39	15:20 (T26) 07:11	06:27	15:45 (T22) 07:27	06:34	08:08 (T11) 05:52
	17:00	24 15:44 (T26) 17:39	37 16:22 (T22) 19:14	19:49	61 09:09 (T11) 20:22	15 19:28 (T6) 20:48
14	07:38	15:22 (T26) 07:10	06:26	15:45 (T22) 07:26	06:32	08:08 (T11) 05:51
	17:01	23 15:45 (T26) 17:41	38 16:23 (T22) 19:15	19:50	61 09:09 (T11) 20:23	18 19:29 (T6) 20:48
15	07:38	15:22 (T26) 07:08	06:24	15:45 (T22) 07:24	06:31	08:08 (T11) 05:50
	17:02	22 15:44 (T26) 17:42	39 16:24 (T22) 19:16	19:52	60 09:08 (T11) 20:24	20 19:30 (T6) 20:49
16	07:38	15:24 (T26) 07:07	06:22	15:44 (T22) 07:22	06:29	08:09 (T11) 05:49
	17:03	20 15:44 (T26) 17:43	40 16:24 (T22) 19:17	19:53	58 09:07 (T11) 20:25	22 19:31 (T6) 20:49
17	07:37	15:24 (T26) 07:06	06:20	15:44 (T22) 07:20	06:28	08:08 (T11) 05:48
	17:05	20 15:44 (T26) 17:44	40 16:24 (T22) 19:19	19:54	58 09:06 (T11) 20:26	24 19:32 (T6) 20:50
18	07:36	15:25 (T26) 07:04	06:19	15:43 (T22) 07:19	06:26	08:09 (T11) 05:47
	17:06	18 15:43 (T26) 17:46	41 16:24 (T22) 19:20	19:55	57 09:06 (T11) 20:27	25 19:33 (T6) 20:50
19	07:36	15:27 (T26) 07:03	06:17	15:44 (T22) 07:17	06:24	08:09 (T11) 05:46
	17:07	16 15:43 (T26) 17:47	41 16:25 (T22) 19:21	19:56	55 09:04 (T11) 20:28	26 19:33 (T6) 20:50
20	07:35	15:29 (T26) 07:01	06:15	15:43 (T22) 07:15	06:23	08:09 (T11) 05:45
	17:08	12 15:41 (T26) 17:48	41 16:24 (T22) 19:22	19:57	53 09:02 (T11) 20:29	26 19:33 (T6) 20:51
21	07:35	15:31 (T26) 07:00	06:14	15:44 (T22) 07:14	06:21	08:10 (T11) 05:44
	17:09	8 15:39 (T26) 17:50	41 16:25 (T22) 19:23	19:58	52 09:02 (T11) 20:30	27 19:33 (T6) 20:51
22	07:34	06:58	06:12	15:44 (T22) 07:12	06:20	08:10 (T11) 05:43
	17:11	17:51	40 16:24 (T22) 19:24	19 08:57 (T11) 20:00	50 09:00 (T11) 20:31	28 19:35 (T6) 20:51
23	07:33	06:57	06:10	15:44 (T22) 07:10	06:18	08:11 (T11) 05:42
	17:12	17:52	40 16:24 (T22) 19:26	27 09:00 (T11) 20:00	48 08:59 (T11) 20:32	29 19:35 (T6) 20:51
24	07:32	06:55	06:08	15:44 (T22) 07:08	06:17	08:11 (T11) 05:41
	17:13	17:53	39 16:23 (T22) 19:27	33 09:04 (T11) 20:01	46 08:57 (T11) 20:33	29 19:35 (T6) 20:52
25	07:32	06:54	06:07	15:46 (T22) 07:07	06:15	08:12 (T11) 05:41
	17:15	17:55	37 16:23 (T22) 19:28	37 09:05 (T11) 20:02	44 08:56 (T11) 20:34	28 19:34 (T6) 20:52
26	07:31	06:52	06:05	15:46 (T22) 07:05	06:14	08:14 (T11) 05:40
	17:16	17:56	36 16:22 (T22) 19:29	42 09:07 (T11) 20:03	41 08:55 (T11) 20:35	29 19:35 (T6) 20:52
27	07:30	06:51	06:03	15:46 (T22) 07:03	06:12	08:14 (T11) 05:39
	17:17	17:57	35 16:21 (T22) 19:30	45 09:08 (T11) 20:04	39 08:53 (T11) 20:36	39 19:35 (T6) 20:52
28	07:29	06:49	06:01	15:48 (T22) 07:01	06:11	08:16 (T11) 05:39
	17:18	17:58	32 16:20 (T22) 19:31	48 09:10 (T11) 20:05	35 08:51 (T11) 20:37	44 19:36 (T6) 20:52
29	07:28	06:48	06:00	15:48 (T22) 07:00	06:09	08:17 (T11) 05:38
	17:20	17:59	31 16:20 (T22) 19:32	50 09:10 (T11) 20:06	32 08:49 (T11) 20:37	46 19:35 (T6) 20:52
30	07:27	06:47	06:00	15:48 (T22) 07:00	06:08	08:18 (T11) 05:37
	17:21	17:59	31 16:20 (T22) 19:33	53 09:11 (T11) 20:07	28 08:47 (T11) 20:38	49 19:35 (T6) 20:52
31	07:26	06:46	06:00	15:48 (T22) 07:00	06:07	08:19 (T11) 05:37
	17:22	17:59	31 16:20 (T22) 19:34	54 09:11 (T11) 20:08	29 08:48 (T11) 20:39	50 19:36 (T6) 20:53
Potential sun hours	293	295	370	401	452	457
Total, worst case	474	808	508	1602	633	1722
Sun reduction	0.39	0.42	0.44	0.51	0.55	0.59
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.68	0.69	0.66	0.65	0.65	0.67
Total reduction	0.27	0.29	0.29	0.33	0.36	0.40
Total, real	127	236	148	535	229	688

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

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

Project:
Baron_SFA

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EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4468 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (853)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns for months and values: Jan 0.39, Feb 0.42, Mar 0.44, Apr 0.51, May 0.55, Jun 0.59, Jul 0.64, Aug 0.91, Sep 0.53, Oct 0.45, Nov 0.29, Dec 0.28

Assumptions for shadow calculations

Operational time

Table with 13 columns for wind directions and values: N 210, NNE 144, NE 244, ENE 226, E 221, ESE 198, SE 388, SSE 456, S 848, SSW 816, SW 949, WSW 930, W 1,255, WNW 1,162, NW 542, NNW 171, Sum 8,760

Main shadow calculation table with columns for months (July-December) and rows for start times, potential sun hours, and total reduction.

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

Matrix for table layout with columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

Project:

Baron_SFA

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10/11/2017 10:32 AM / 101

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217 Montgomery St.
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(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4470 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (854)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Assumptions for shadow calculations

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June
1	07:40	07:25	06:47	06:54	07:19 (T19)	06:07
	16:48	17:24	18:00	19:36	24 07:43 (T19)	20:08
2	07:40	07:24	06:46	06:53	07:20 (T19)	06:05
	16:49	17:25	18:01	19:37	20 07:40 (T19)	20:10
3	07:40	07:23	06:44	06:51	07:21 (T19)	06:04
	16:50	17:26	18:02	19:38	17 07:38 (T19)	20:11
4	07:40	07:22	07:43 (T8)	06:42	07:24 (T19)	06:03
	16:51	17:28	3 07:46 (T8)	18:03	10 07:34 (T19)	20:12
5	07:40	07:21	07:42 (T8)	06:41	06:01	06:22 (T43)
	16:52	17:29	6 07:48 (T8)	18:04	20:13	82 19:35 (T9)
6	07:40	07:20	07:40 (T8)	06:39	06:00	06:20 (T43)
	16:52	17:30	8 07:48 (T8)	18:06	20:14	84 19:35 (T9)
7	07:40	07:19	07:39 (T8)	06:37	05:59	06:19 (T43)
	16:53	17:31	11 07:50 (T8)	18:07	20:15	86 19:35 (T9)
8	07:40	07:17	07:38 (T8)	07:36	05:58	06:18 (T43)
	16:55	17:33	13 07:51 (T8)	19:08	20:16	88 19:36 (T9)
9	07:40	07:16	07:37 (T8)	07:34	05:56	06:17 (T43)
	16:56	17:34	15 07:52 (T8)	19:09	20:17	89 19:36 (T9)
10	07:40	07:15	07:35 (T8)	07:32	05:55	06:16 (T43)
	16:57	17:35	17 07:52 (T8)	19:10	20:18	90 19:37 (T9)
11	07:39	07:14	07:34 (T8)	07:31	05:54	06:15 (T43)
	16:58	17:37	19 07:53 (T8)	19:12	20:20	92 19:37 (T9)
12	07:39	07:12	07:33 (T8)	07:29	05:53	06:14 (T43)
	16:59	17:38	21 07:54 (T8)	19:13	20:21	92 19:37 (T9)
13	07:39	07:11	07:31 (T8)	07:27	05:52	06:13 (T43)
	17:00	17:39	22 07:53 (T8)	19:14	20:22	93 19:38 (T9)
14	07:38	07:10	07:30 (T8)	07:26	05:51	06:12 (T43)
	17:01	17:41	24 07:54 (T8)	19:15	20:23	94 19:38 (T9)
15	07:38	07:08	07:29 (T8)	07:24	05:50	06:12 (T43)
	17:02	17:42	25 07:54 (T8)	19:16	20:24	93 19:38 (T9)
16	07:37	07:07	07:27 (T8)	07:22	05:49	06:13 (T43)
	17:03	17:43	27 07:54 (T8)	19:17	20:25	90 19:38 (T9)
17	07:37	07:06	07:26 (T8)	07:20	05:48	06:15 (T43)
	17:05	17:44	28 07:54 (T8)	19:19	20:26	87 19:38 (T9)
18	07:36	07:04	07:24 (T8)	07:19	05:47	06:16 (T43)
	17:06	17:46	29 07:53 (T8)	19:20	20:27	84 19:38 (T9)
19	07:36	07:03	07:23 (T8)	07:17	05:46	06:18 (T43)
	17:07	17:47	30 07:53 (T8)	19:21	20:28	80 19:38 (T9)
20	07:35	07:01	07:21 (T8)	07:15	05:45	18:59 (T9)
	17:08	17:48	31 07:52 (T8)	19:22	20:29	69 19:38 (T9)
21	07:35	07:00	07:20 (T8)	07:13	05:44	18:54 (T9)
	17:09	17:50	32 07:52 (T8)	19:23	20:30	69 19:38 (T9)
22	07:34	06:58	07:21 (T8)	07:12	05:43	18:50 (T9)
	17:11	17:51	29 07:50 (T8)	19:24	20:31	68 19:38 (T9)
23	07:33	06:57	07:22 (T8)	07:10	05:42	18:48 (T9)
	17:12	17:52	27 07:49 (T8)	19:25	20:32	68 19:38 (T9)
24	07:32	06:55	07:23 (T8)	07:08	05:41	06:36 (T43)
	17:13	17:53	24 07:47 (T8)	19:27	20:33	68 19:38 (T9)
25	07:32	06:54	07:25 (T8)	07:07	05:41	06:35 (T43)
	17:15	17:55	21 07:46 (T8)	19:28	20:34	69 19:38 (T9)
26	07:31	06:52	07:27 (T8)	07:05	05:40	06:34 (T43)
	17:16	17:56	16 07:43 (T8)	19:29	20:35	68 19:38 (T9)
27	07:30	06:50	07:31 (T8)	07:03	05:39	06:32 (T43)
	17:17	17:57	7 07:38 (T8)	19:30	20:36	68 19:38 (T9)
28	07:29	06:49	07:01	07:21 (T19)	06:11	06:31 (T43)
	17:18	17:58	19:31	26 07:47 (T19)	20:05	62 19:30 (T9)
29	07:28		07:00	07:19 (T19)	06:09	06:29 (T43)
	17:20		19:32	27 07:46 (T19)	20:06	64 19:30 (T9)
30	07:27		06:58	07:17 (T19)	06:08	06:28 (T43)
	17:21		19:33	28 07:45 (T19)	20:07	69 19:32 (T9)
31	07:26		06:56	07:17 (T19)		05:37
	17:22		19:35	26 07:43 (T19)		20:39
Potential sun hours	293	295	370	401	452	457
Total, worst case		485	290	558	2444	1864
Sun reduction		0.42	0.44	0.51	0.55	0.59
Oper. time red.		1.00	1.00	1.00	1.00	1.00
Wind dir. red.		0.64	0.67	0.66	0.66	0.65
Total reduction		0.27	0.30	0.34	0.36	0.38
Total, real		131	86	187	883	716

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

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

Baron_SFA

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10/11/2017 10:32 AM / 102

Licensed user:

EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:

10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4470 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (854)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December
1 05:37 20:52	62 18:40 (T9) 06:02 19:42 (T9) 20:32	92 06:24 (T43) 06:35 19:47 (T9) 19:46		17 07:05 (T8) 07:20 18:53 17:05	17 07:22 (T8) 16:39
2 05:37 20:52	62 18:40 (T9) 06:03 19:42 (T9) 20:31	92 06:25 (T43) 06:36 19:47 (T9) 19:44		15 07:06 (T8) 07:21 18:52 17:03	15 07:21 (T8) 16:39
3 05:38 20:52	63 18:40 (T9) 06:04 19:43 (T9) 20:30	90 06:26 (T43) 06:37 19:46 (T9) 19:43		13 07:07 (T8) 07:22 18:50 17:02	13 07:21 (T8) 16:38
4 05:38 20:51	63 18:41 (T9) 06:05 19:44 (T9) 20:29	89 06:27 (T43) 06:38 19:46 (T9) 19:41		10 07:08 (T8) 07:23 18:48 17:01	10 07:19 (T8) 16:38
5 05:39 20:51	64 18:40 (T9) 06:06 19:44 (T9) 20:28	87 06:28 (T43) 06:39 19:45 (T9) 19:39		8 07:09 (T8) 07:24 18:46 17:00	8 07:18 (T8) 16:38
6 05:40 20:51	63 18:41 (T9) 06:07 19:44 (T9) 20:26	86 06:29 (T43) 06:40 19:45 (T9) 19:37		5 07:10 (T8) 07:25 18:45 17:00	5 07:17 (T8) 16:38
7 05:40 20:51	64 18:40 (T9) 06:08 19:44 (T9) 20:25	84 06:30 (T43) 06:41 19:44 (T9) 19:36		2 07:11 (T8) 07:26 18:43 16:57	2 07:13 (T8) 16:38
8 05:41 20:50	64 18:40 (T9) 06:09 19:44 (T9) 20:24	84 06:31 (T43) 06:42 19:44 (T9) 19:34	10 07:12 (T8) 07:15 07:29 (T9) 18:41	2 07:12 (T8) 07:15 18:43 16:52	2 07:15 (T8) 16:38
9 05:42 20:50	65 18:41 (T9) 06:10 19:45 (T9) 20:23	82 06:32 (T43) 06:43 19:44 (T9) 19:32	10 07:13 (T8) 07:16 07:29 (T9) 18:41	2 07:13 (T8) 07:16 18:43 16:52	2 07:15 (T8) 16:38
10 05:42 20:50	64 18:40 (T9) 06:11 19:45 (T9) 20:23	80 06:33 (T43) 06:44 19:43 (T9) 19:32	17 07:14 (T8) 07:17 07:32 (T9) 18:40	2 07:14 (T8) 07:17 18:43 16:52	2 07:15 (T8) 16:38
11 05:43 20:49	65 18:40 (T9) 06:12 19:45 (T9) 20:21	77 06:34 (T43) 06:45 19:42 (T9) 19:30	20 07:15 (T8) 07:18 07:33 (T9) 18:38	2 07:15 (T8) 07:18 18:43 16:52	2 07:15 (T8) 16:38
12 05:44 20:49	66 18:40 (T9) 06:13 19:46 (T9) 20:19	75 06:35 (T43) 06:46 19:41 (T9) 19:29	24 07:16 (T8) 07:19 07:09 (T9) 18:36	2 07:16 (T8) 07:19 18:43 16:52	2 07:15 (T8) 16:38
13 05:44 20:48	66 18:40 (T9) 06:15 19:46 (T9) 20:17	71 06:36 (T43) 06:47 19:40 (T9) 19:27	26 07:17 (T8) 07:20 07:35 (T9) 18:35	2 07:17 (T8) 07:20 18:43 16:52	2 07:15 (T8) 16:38
14 05:45 20:48	67 18:40 (T9) 06:16 19:47 (T9) 20:16	68 06:38 (T43) 06:49 19:39 (T9) 19:25	28 07:18 (T8) 07:21 07:09 (T9) 18:33	2 07:18 (T8) 07:21 18:43 16:50	2 07:15 (T8) 16:38
15 05:46 20:47	67 18:40 (T9) 06:17 19:47 (T9) 20:14	64 06:39 (T43) 06:50 19:39 (T9) 19:23	27 07:19 (T8) 07:23 07:37 (T9) 18:30	2 07:19 (T8) 07:23 18:43 16:50	2 07:15 (T8) 16:38
16 05:47 20:46	67 18:40 (T9) 06:18 19:47 (T9) 20:13	60 06:40 (T43) 06:51 19:37 (T9) 19:22	27 07:20 (T8) 07:24 07:11 (T9) 18:30	12 08:01 (T8) 16:49 07:58 (T8) 16:49	12 08:13 (T8) 16:49
17 05:48 20:46	67 18:40 (T9) 06:19 19:47 (T9) 20:11	55 06:41 (T43) 06:52 19:36 (T9) 19:20	26 07:21 (T8) 07:25 07:37 (T9) 18:28	19 08:17 (T8) 16:48 07:56 (T8) 16:48	19 08:17 (T8) 16:48
18 05:49 20:45	68 18:40 (T9) 06:20 19:48 (T9) 20:11	50 06:42 (T43) 06:53 19:34 (T9) 19:18	24 07:22 (T8) 07:26 07:12 (T9) 18:26	22 08:18 (T8) 16:47 07:54 (T8) 16:47	22 08:18 (T8) 16:47
19 05:49 20:44	68 18:39 (T9) 06:21 19:48 (T9) 20:10	45 06:43 (T43) 06:54 19:32 (T9) 19:16	23 07:23 (T8) 07:27 07:13 (T9) 18:25	26 08:20 (T8) 16:46 07:52 (T8) 16:46	26 08:20 (T8) 16:46
20 05:50 20:44	68 18:39 (T9) 06:22 19:47 (T9) 20:08	38 06:44 (T43) 06:55 19:30 (T9) 19:15	22 07:24 (T8) 07:29 07:14 (T9) 18:23	28 08:21 (T8) 16:45 07:51 (T8) 16:45	28 08:21 (T8) 16:45
21 05:51 20:43	69 18:39 (T9) 06:23 19:48 (T9) 20:05	34 06:45 (T43) 06:56 19:28 (T9) 19:13	20 07:25 (T8) 07:30 07:15 (T9) 18:22	30 08:22 (T8) 16:44 07:51 (T8) 16:44	30 08:22 (T8) 16:44
22 05:52 20:42	69 18:39 (T9) 06:24 19:48 (T9) 20:04	29 06:46 (T43) 06:57 19:25 (T9) 19:11	18 07:26 (T8) 07:31 07:16 (T9) 18:20	31 08:23 (T8) 16:43 07:52 (T8) 16:43	31 08:23 (T8) 16:43
23 05:53 20:41	69 18:39 (T9) 06:25 19:48 (T9) 20:02	21 06:47 (T43) 06:58 19:21 (T9) 19:09	16 07:27 (T8) 07:32 07:17 (T9) 18:19	31 08:24 (T8) 16:42 07:53 (T8) 16:42	31 08:24 (T8) 16:42
24 05:54 20:40	69 18:39 (T9) 06:26 19:48 (T9) 20:01	8 06:48 (T43) 06:59 19:14 (T9) 19:07	14 07:28 (T8) 07:33 07:18 (T9) 18:17	30 08:25 (T8) 16:41 07:54 (T8) 16:41	30 08:25 (T8) 16:41
25 05:55 20:39	82 06:31 (T43) 06:26 19:48 (T9) 19:58	12 06:50 (T43) 07:00 19:06 (T9) 19:00	12 07:29 (T8) 07:34 07:22 (T9) 18:16	29 08:26 (T8) 16:40 07:55 (T8) 16:40	29 08:26 (T8) 16:40
26 05:56 20:38	87 06:26 (T43) 06:28 19:49 (T9) 19:56	7 06:51 (T43) 07:01 19:02 (T9) 19:02	9 07:30 (T8) 07:35 07:28 (T9) 18:14	28 08:27 (T8) 16:39 07:56 (T8) 16:39	28 08:27 (T8) 16:39
27 05:57 20:38	89 06:25 (T43) 06:29 19:49 (T9) 19:54	2 06:52 (T43) 07:02 19:00 (T9) 19:00	6 07:31 (T8) 07:36 07:23 (T9) 18:13	26 08:28 (T8) 16:38 07:57 (T8) 16:38	26 08:28 (T8) 16:38
28 05:58 20:37	90 06:24 (T43) 06:31 19:49 (T9) 19:53	1 06:53 (T43) 07:03 18:59 (T9) 18:59	2 07:32 (T8) 07:37 07:25 (T9) 18:11	25 08:29 (T8) 16:37 07:58 (T8) 16:37	25 08:29 (T8) 16:37
29 05:59 20:36	92 06:23 (T43) 06:32 19:48 (T9) 19:51	0 06:54 (T43) 07:04 18:57 (T9) 18:57	1 07:33 (T8) 07:38 07:39 (T9) 18:10	24 08:30 (T8) 16:36 08:01 (T8) 16:36	24 08:30 (T8) 16:36
30 06:00 20:34	93 06:23 (T43) 06:33 19:48 (T9) 19:49	0 06:55 (T43) 07:05 18:55 (T9) 18:55	0 07:34 (T8) 07:39 07:41 (T9) 18:09	22 08:31 (T8) 16:35 08:23 (T8) 16:35	22 08:31 (T8) 16:35
31 06:01 20:33	92 06:23 (T43) 06:34 19:47 (T9) 19:48	0 06:56 (T43) 07:06 18:54 (T9) 18:54	0 07:35 (T8) 07:40 07:42 (T9) 18:07	19 08:32 (T8) 16:34 08:04 (T8) 16:34	19 08:32 (T8) 16:34
Potential sun hours 464	431	375	343	294	283
Total, worst case 2215	1477	371	422	70	
Sun reduction 0.64	0.91	0.53	0.45	0.29	
Oper. time red. 1.00	1.00	1.00	1.00	1.00	
Wind dir. red. 0.65	0.66	0.67	0.64	0.64	
Total reduction 0.42	0.60	0.36	0.29	0.19	
Total, real 926	885	132	122	13	

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

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

Project: Baron_SFA

Printed/Page: 10/11/2017 10:32 AM / 103

Licensed user: EDR 217 Montgomery St. US-SYRACUSE, NY 13202 (315) 471 0688

Calculated: 10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4471 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (855)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Table with 12 columns (Jan-Dec) and 2 rows of sunshine probability values.

Operational time

Table with 13 columns (N-Sum) and 2 rows of operational time values.

Assumptions for shadow calculations

Main shadow calculation table with columns for months (January to June) and rows for each day of the month, including start/end times and shadow reduction percentages.

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

Summary table with 5 columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, and Last time (hh:mm) with flicker.

Project:
Baron_SFA

Printed/Page
10/11/2017 10:32 AM / 104
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688
Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4471 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (855)

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0.39 0.42 0.44 0.51 0.55 0.59 0.64 0.91 0.53 0.45 0.29 0.28

Operational time

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW Sum
210 144 244 226 221 198 388 456 848 816 949 930 1,255 1,162 542 171 8,760
Idle start wind speed: Cut in wind speed from power curve

	July	August	September	October	November	December
1	05:37	06:10 (T43) 06:02	06:24 (T43) 06:35	18:37 (T9) 07:07	07:27 (T19) 06:43	07:28 (T8) 07:20
2	05:37	06:44 (T43) 20:32	06:52 (T43) 19:46	19:17 (T9) 18:53	07:48 (T19) 17:05	07:58 (T8) 16:39
3	05:38	06:10 (T43) 06:04	06:26 (T43) 06:37	18:38 (T9) 07:09	07:29 (T19) 06:46	07:26 (T8) 07:22
4	05:38	06:45 (T43) 20:30	06:52 (T43) 19:43	19:15 (T9) 18:50	07:43 (T19) 17:02	08:01 (T8) 16:38
5	05:39	06:10 (T43) 06:05	06:27 (T43) 06:38	18:39 (T9) 07:10	07:30 (T19) 06:47	07:25 (T8) 07:23
6	05:40	06:46 (T43) 20:29	06:51 (T43) 19:41	19:11 (T9) 18:48	07:41 (T19) 17:01	08:02 (T8) 16:38
7	05:40	06:09 (T43) 06:08	06:30 (T43) 06:41	18:43 (T9) 07:13	07:23 (T19) 06:51	07:23 (T8) 07:26
8	05:41	06:46 (T43) 20:25	06:49 (T43) 19:36	19:07 (T9) 18:43	07:42 (T19) 16:57	08:05 (T8) 16:38
9	05:42	06:09 (T43) 06:09	06:31 (T43) 06:42	18:45 (T9) 07:15	07:22 (T19) 06:52	07:22 (T8) 07:27
10	05:42	06:47 (T43) 20:24	06:32 (T43) 06:43	19:04 (T9) 18:41	07:32 (T19) 07:16	08:05 (T8) 16:38
11	05:43	06:09 (T43) 06:12	06:34 (T43) 06:45	18:58 (T9) 07:17	07:28 (T19) 06:54	07:21 (T8) 07:29
12	05:44	06:48 (T43) 20:21	06:35 (T43) 06:46	19:13 (T9) 18:38	07:50 (T19) 18:38	08:07 (T8) 16:38
13	05:44	06:09 (T43) 06:13	06:36 (T43) 06:47	19:16 (T9) 18:35	07:53 (T19) 18:35	08:08 (T8) 16:38
14	05:45	06:49 (T43) 20:19	06:37 (T43) 06:49	19:19 (T9) 18:33	07:56 (T19) 18:33	08:09 (T8) 16:38
15	05:46	06:09 (T43) 06:15	06:38 (T43) 06:49	19:22 (T9) 18:31	07:59 (T19) 18:31	08:10 (T8) 16:38
16	05:47	06:50 (T43) 20:16	06:39 (T43) 06:50	19:25 (T9) 18:29	08:02 (T19) 18:29	08:11 (T8) 16:38
17	05:48	06:09 (T43) 06:17	06:40 (T43) 06:51	19:28 (T9) 18:27	08:05 (T19) 18:27	08:12 (T8) 16:38
18	05:49	06:50 (T43) 20:14	06:41 (T43) 06:52	19:31 (T9) 18:25	08:08 (T19) 18:25	08:13 (T8) 16:38
19	05:49	06:11 (T43) 06:19	06:42 (T43) 06:53	19:34 (T9) 18:23	08:11 (T19) 18:23	08:14 (T8) 16:38
20	05:50	06:52 (T43) 20:11	06:43 (T43) 06:54	19:37 (T9) 18:21	08:14 (T19) 18:21	08:15 (T8) 16:38
21	05:51	06:12 (T43) 06:20	06:44 (T43) 06:55	19:40 (T9) 18:19	08:17 (T19) 18:19	08:16 (T8) 16:38
22	05:52	06:53 (T43) 20:08	06:45 (T43) 06:56	19:43 (T9) 18:17	08:20 (T19) 18:17	08:17 (T8) 16:38
23	05:53	06:13 (T43) 06:21	06:46 (T43) 06:57	19:46 (T9) 18:15	08:23 (T19) 18:15	08:18 (T8) 16:38
24	05:54	06:54 (T43) 20:05	06:47 (T43) 06:58	19:49 (T9) 18:13	08:26 (T19) 18:13	08:19 (T8) 16:38
25	05:55	06:14 (T43) 06:22	06:48 (T43) 06:59	19:52 (T9) 18:11	08:29 (T19) 18:11	08:20 (T8) 16:38
26	05:56	06:55 (T43) 19:58	06:49 (T43) 07:00	19:55 (T9) 18:09	08:32 (T19) 18:09	08:21 (T8) 16:38
27	05:57	06:15 (T43) 06:23	06:50 (T43) 07:01	19:58 (T9) 18:07	08:35 (T19) 18:07	08:22 (T8) 16:38
28	05:58	06:56 (T43) 19:54	06:51 (T43) 07:02	20:01 (T9) 18:05	08:38 (T19) 18:05	08:23 (T8) 16:38
29	05:59	06:16 (T43) 06:24	06:52 (T43) 07:03	20:04 (T9) 18:03	08:41 (T19) 18:03	08:24 (T8) 16:38
30	06:00	06:57 (T43) 19:51	06:53 (T43) 07:04	20:07 (T9) 18:01	08:44 (T19) 18:01	08:25 (T8) 16:38
31	06:01	06:22 (T43) 06:32	06:54 (T43) 07:05	20:10 (T9) 17:59	08:47 (T19) 17:59	08:26 (T8) 16:38
Potential sun hours	464	431	375	343	294	283
Total, worst case	1152	1117	982	137	1151	458
Sun reduction	0.64	0.91	0.53	0.45	0.29	0.28
Oper. time red.	1.00	1.00	1.00	1.00	1.00	1.00
Wind dir. red.	0.69	0.67	0.66	0.64	0.61	0.61
Total reduction	0.44	0.60	0.35	0.28	0.18	0.17
Total, real	505	673	342	39	202	78

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

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

Printed/Page
10/11/2017 10:32 AM / 105
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688

Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4506 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (870)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Operational time

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

	January	February	March	April	May	June	
1	07:40	07:25	06:47	06:55	06:07	05:37	19:05 (T69)
	16:48	17:24	18:00	19:36	20:09	20:40	52 19:57 (T69)
2	07:40	07:24	06:46	06:53	06:06	05:36	19:05 (T69)
	16:49	17:25	18:01	19:37	20:10	20:41	52 19:57 (T69)
3	07:40	07:23	06:44	06:51	19:01 (T65) 06:04	05:36	19:05 (T69)
	16:50	17:27	18:02	19:38	12 19:13 (T65) 20:11	20:41	53 19:58 (T69)
4	07:40	07:22	06:43	06:49	18:58 (T65) 06:03	05:35	19:05 (T69)
	16:51	17:28	18:03	19:39	18 19:16 (T65) 20:12	20:42	53 19:58 (T69)
5	07:40	07:21	06:41	06:48	18:56 (T65) 06:02	05:35	19:05 (T69)
	16:52	17:29	18:05	19:40	21 19:17 (T65) 20:13	20:43	53 19:58 (T69)
6	07:40	07:20	06:39	06:46	18:54 (T65) 06:00	05:35	19:05 (T69)
	16:53	17:30	18:06	19:42	24 19:18 (T65) 20:14	20:44	54 19:59 (T69)
7	07:40	07:19	06:38	06:44	18:53 (T65) 05:59	05:34	19:06 (T69)
	16:54	17:32	18:07	19:43	26 19:19 (T65) 20:15	20:44	53 19:59 (T69)
8	07:40	07:18	07:36	06:43	18:52 (T65) 05:58	05:34	19:06 (T69)
	16:55	17:33	19:08	19:44	27 19:19 (T65) 20:16	20:45	54 20:00 (T69)
9	07:40	07:16	07:34	06:41	18:51 (T65) 05:57	05:34	19:05 (T69)
	16:56	17:34	19:09	19:45	28 19:19 (T65) 20:17	20:46	54 19:59 (T69)
10	07:40	07:15	07:33	06:39	18:51 (T65) 05:56	19:26 (T69) 05:34	19:06 (T69)
	16:57	17:36	19:11	19:46	29 19:20 (T65) 20:19	8 19:34 (T69) 20:46	53 19:59 (T69)
11	07:39	07:14	07:31	06:38	18:50 (T65) 05:54	19:21 (T69) 05:33	19:06 (T69)
	16:58	17:37	19:12	19:47	30 19:20 (T65) 20:20	17 19:38 (T69) 20:47	54 20:00 (T69)
12	07:39	07:12	07:29	06:36	18:49 (T65) 05:53	19:18 (T69) 05:33	19:06 (T69)
	16:59	17:38	19:13	19:48	30 19:19 (T65) 20:21	23 19:41 (T69) 20:47	54 20:00 (T69)
13	07:39	07:11	07:28	06:34	18:50 (T65) 05:52	19:16 (T69) 05:33	19:06 (T69)
	17:00	17:40	19:14	19:49	29 19:19 (T65) 20:22	27 19:43 (T69) 20:48	54 20:00 (T69)
14	07:38	07:10	07:26	06:33	18:49 (T65) 05:51	19:15 (T69) 05:33	19:07 (T69)
	17:01	17:41	19:15	19:51	29 19:18 (T65) 20:23	30 19:45 (T69) 20:48	54 20:01 (T69)
15	07:38	07:08	07:24	06:31	18:50 (T65) 05:50	19:13 (T69) 05:33	19:07 (T69)
	17:03	17:42	19:17	19:52	28 19:18 (T65) 20:24	33 19:46 (T69) 20:49	54 20:01 (T69)
16	07:38	07:07	07:22	06:29	18:50 (T65) 05:49	19:12 (T69) 05:33	19:07 (T69)
	17:04	17:43	19:18	19:53	27 19:17 (T65) 20:25	35 19:47 (T69) 20:49	54 20:01 (T69)
17	07:37	07:06	07:21	06:28	18:50 (T65) 05:48	19:11 (T69) 05:33	19:07 (T69)
	17:05	17:45	19:19	19:54	26 19:16 (T65) 20:26	37 19:48 (T69) 20:50	54 20:01 (T69)
18	07:36	07:04	07:19	06:26	18:51 (T65) 05:47	19:10 (T69) 05:33	19:07 (T69)
	17:06	17:46	19:20	19:55	24 19:15 (T65) 20:27	39 19:49 (T69) 20:50	54 20:01 (T69)
19	07:36	07:03	07:17	06:25	18:52 (T65) 05:46	19:09 (T69) 05:33	19:07 (T69)
	17:07	17:47	19:21	19:56	21 19:13 (T65) 20:28	41 19:50 (T69) 20:50	55 20:02 (T69)
20	07:35	07:01	07:15	06:23	18:54 (T65) 05:45	19:09 (T69) 05:33	19:08 (T69)
	17:09	17:49	19:22	19:57	18 19:12 (T65) 20:29	43 19:52 (T69) 20:51	55 20:03 (T69)
21	07:35	07:00	07:14	06:22	18:55 (T65) 05:44	19:08 (T69) 05:34	19:08 (T69)
	17:10	17:50	19:23	19:58	14 19:09 (T65) 20:30	44 19:52 (T69) 20:51	55 20:03 (T69)
22	07:34	06:58	07:12	06:20	18:59 (T65) 05:43	19:07 (T69) 05:34	19:08 (T69)
	17:11	17:51	19:25	20:00	7 19:06 (T65) 20:31	46 19:53 (T69) 20:51	55 20:03 (T69)
23	07:33	06:57	07:10	06:19	05:43	19:07 (T69) 05:34	19:08 (T69)
	17:12	17:52	19:26	20:00	20:32	46 19:53 (T69) 20:51	55 20:03 (T69)
24	07:33	06:55	07:08	06:17	05:42	19:06 (T69) 05:34	19:08 (T69)
	17:14	17:54	19:27	20:01	20:33	47 19:53 (T69) 20:52	54 20:02 (T69)
25	07:32	06:54	07:07	06:16	05:41	19:06 (T69) 05:35	19:09 (T69)
	17:15	17:55	19:28	20:02	20:34	49 19:55 (T69) 20:52	54 20:03 (T69)
26	07:31	06:52	07:05	06:14	05:40	19:06 (T69) 05:35	19:09 (T69)
	17:16	17:56	19:29	20:03	20:35	49 19:55 (T69) 20:52	54 20:03 (T69)
27	07:30	06:51	07:03	06:13	05:40	19:06 (T69) 05:35	19:10 (T69)
	17:17	17:57	19:30	20:04	20:36	50 19:56 (T69) 20:52	54 20:04 (T69)
28	07:29	06:49	07:02	06:11	05:39	19:05 (T69) 05:36	19:10 (T69)
	17:19	17:59	19:31	20:05	20:37	51 19:56 (T69) 20:52	54 20:04 (T69)
29	07:28	07:00	06:10	05:38	19:05 (T69) 05:36	19:05 (T69) 05:36	19:09 (T69)
	17:20	19:33	20:06	20:37	51 19:56 (T69) 20:52	55 20:04 (T69)	19:10 (T69)
30	07:27	06:58	06:08	05:38	19:05 (T69) 05:37	19:05 (T69) 05:37	19:10 (T69)
	17:21	19:34	20:07	20:38	52 19:57 (T69) 20:52	54 20:04 (T69)	19:10 (T69)
31	07:26	06:56	05:37	05:37	19:05 (T69) 05:37	19:05 (T69) 05:37	19:10 (T69)
	17:23	19:35	20:39	20:39	51 19:56 (T69) 20:52	54 20:04 (T69)	19:10 (T69)
Potential sun hours	294	295	370	401	452	457	
Total, worst case				468	869	1617	
Sun reduction				0.51	0.55	0.59	
Oper. time red.				1.00	1.00	1.00	
Wind dir. red.				0.66	0.64	0.64	
Total reduction				0.34	0.35	0.38	
Total, real				158	307	613	

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

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

Project:
Baron_SFA

Printed/Page
10/11/2017 10:32 AM / 106
Licensed user:
EDR
217 Montgomery St.
US-SYRACUSE, NY 13202
(315) 471 0688
Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar

Shadow receptor: 4506 - Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (870)

Assumptions for shadow calculations

Sunshine probability S/S0 (Sun hours/Possible sun hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0.39	0.42	0.44	0.51	0.55	0.59	0.64	0.91	0.53	0.45	0.29	0.28

Operational time°

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Sum
210	144	244	226	221	198	388	456	848	816	949	930	1,255	1,162	542	171	8,760

Idle start wind speed: Cut in wind speed from power curve

July	August	September	October	November	December	
1 05:37	19:10 (T69) 06:02	19:30 (T69) 06:35	18:49 (T65) 07:07	06:43	07:20	
20:52	54 20:04 (T69) 20:32	21 19:51 (T69) 19:46	30 19:19 (T65) 18:54	17:05	16:39	
2 05:38	19:11 (T69) 06:03	19:33 (T69) 06:36	18:49 (T65) 07:08	06:45	07:21	
20:52	54 20:05 (T69) 20:31	14 19:47 (T69) 19:44	29 19:18 (T65) 18:52	17:04	16:39	
3 05:38	19:10 (T69) 06:04	06:37	18:49 (T65) 07:09	06:46	07:22	
20:52	54 20:04 (T69) 20:30	19:43	28 19:17 (T65) 18:50	17:02	16:39	
4 05:39	19:11 (T69) 06:05	06:38	18:49 (T65) 07:10	06:47	07:23	
20:51	54 20:05 (T69) 20:29	19:41	27 19:16 (T65) 18:48	17:01	16:38	
5 05:39	19:11 (T69) 06:06	06:39	18:49 (T65) 07:11	06:48	07:24	
20:51	53 20:04 (T69) 20:28	19:39	26 19:15 (T65) 18:47	17:00	16:38	
6 05:40	19:11 (T69) 06:08	06:40	18:50 (T65) 07:13	06:50	07:25	
20:51	54 20:05 (T69) 20:27	19:38	24 19:14 (T65) 18:45	16:59	16:38	
7 05:41	19:12 (T69) 06:09	06:41	18:51 (T65) 07:14	06:51	07:26	
20:51	53 20:05 (T69) 20:25	19:36	21 19:12 (T65) 18:43	16:58	16:38	
8 05:41	19:12 (T69) 06:10	06:42	18:52 (T65) 07:15	06:52	07:27	
20:50	53 20:05 (T69) 20:24	19:34	18 19:10 (T65) 18:42	16:56	16:38	
9 05:42	19:12 (T69) 06:11	06:44	18:55 (T65) 07:16	06:53	07:28	
20:50	53 20:05 (T69) 20:23	19:32	12 19:07 (T65) 18:40	16:55	16:38	
10 05:43	19:13 (T69) 06:12	06:45	07:17	06:55	07:29	
20:50	52 20:05 (T69) 20:21	19:31	18:38	16:54	16:38	
11 05:43	19:12 (T69) 06:13	06:46	07:18	06:56	07:29	
20:49	53 20:05 (T69) 20:20	19:29	18:37	16:53	16:38	
12 05:44	19:13 (T69) 06:14	06:47	07:19	06:57	07:30	
20:49	52 20:05 (T69) 20:19	19:27	18:35	16:52	16:38	
13 05:45	19:13 (T69) 06:15	06:48	07:21	06:58	07:31	
20:48	52 20:05 (T69) 20:17	19:25	18:33	16:51	16:38	
14 05:46	19:14 (T69) 06:16	06:49	07:22	07:00	07:32	
20:48	51 20:05 (T69) 20:16	19:24	18:32	16:50	16:38	
15 05:47	19:15 (T69) 06:17	06:50	07:23	07:01	07:33	
20:47	50 20:05 (T69) 20:14	19:22	18:30	16:49	16:39	
16 05:47	19:14 (T69) 06:18	06:51	07:24	07:02	07:33	
20:46	50 20:04 (T69) 20:13	19:20	18:28	16:48	16:39	
17 05:48	19:15 (T69) 06:19	06:52	07:25	07:03	07:34	
20:46	49 20:04 (T69) 20:12	19:18	18:27	16:48	16:39	
18 05:49	19:15 (T69) 06:20	06:53	07:26	07:05	07:35	
20:45	49 20:04 (T69) 20:10	19:16	18:25	16:47	16:40	
19 05:50	19:16 (T69) 06:21	06:54	07:28	07:06	07:35	
20:44	48 20:04 (T69) 20:09	19:15	18:24	16:46	16:40	
20 05:51	19:17 (T69) 06:22	06:55	07:29	07:07	07:36	
20:44	47 20:04 (T69) 20:07	19:13	18:22	16:45	16:40	
21 05:52	19:17 (T69) 06:23	19:03 (T65) 06:56	07:30	07:08	07:37	
20:43	46 20:03 (T69) 20:06	9 19:12 (T65) 19:11	18:21	16:45	16:41	
22 05:53	19:17 (T69) 06:24	18:59 (T65) 06:57	07:31	07:09	07:37	
20:42	45 20:02 (T69) 20:04	16 19:15 (T65) 19:09	18:19	16:44	16:41	
23 05:54	19:18 (T69) 06:25	18:57 (T65) 06:58	07:32	07:11	07:38	
20:41	43 20:01 (T69) 20:02	19 19:16 (T65) 19:08	18:18	16:43	16:42	
24 05:54	19:19 (T69) 06:27	18:56 (T65) 06:59	07:33	07:12	07:38	
20:40	42 20:01 (T69) 20:01	21 19:17 (T65) 19:06	18:16	16:43	16:42	
25 05:55	19:20 (T69) 06:28	18:54 (T65) 07:01	07:35	07:13	07:38	
20:39	40 20:00 (T69) 19:58	24 19:18 (T65) 19:04	18:15	16:42	16:43	
26 05:56	19:21 (T69) 06:29	18:53 (T65) 07:02	07:36	07:14	07:39	
20:39	38 19:59 (T69) 19:56	26 19:19 (T65) 19:02	18:13	16:41	16:44	
27 05:57	19:22 (T69) 06:30	18:52 (T65) 07:03	07:37	07:15	07:39	
20:38	37 19:59 (T69) 19:54	27 19:19 (T65) 19:01	18:12	16:41	16:44	
28 05:58	19:23 (T69) 06:31	18:51 (T65) 07:04	07:38	07:16	07:39	
20:37	34 19:57 (T69) 19:53	28 19:19 (T65) 18:59	18:10	16:40	16:45	
29 05:59	19:24 (T69) 06:32	18:50 (T65) 07:05	07:40	07:18	07:40	
20:36	32 19:56 (T69) 19:51	29 19:19 (T65) 18:57	18:09	16:40	16:46	
30 06:00	19:26 (T69) 06:33	18:50 (T65) 07:06	07:41	07:19	07:40	
20:35	29 19:55 (T69) 19:49	29 19:19 (T65) 18:55	18:08	16:40	16:46	
31 06:01	19:28 (T69) 06:34	18:49 (T65)	07:42		07:40	
20:33	25 19:53 (T69) 19:48	30 19:19 (T65)	18:06		16:47	
Potential sun hours	463	431	375	343	294	283
Total, worst case	1446	293	215			
Sun reduction	0.64	0.91	0.53			
Oper. time red.	1.00	1.00	1.00			
Wind dir. red.	0.64	0.66	0.66			
Total reduction	0.41	0.60	0.35			
Total, real	595	176	76			

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

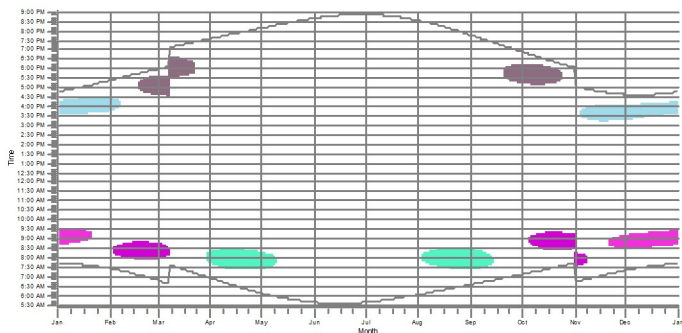
Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:
Baron_SFA

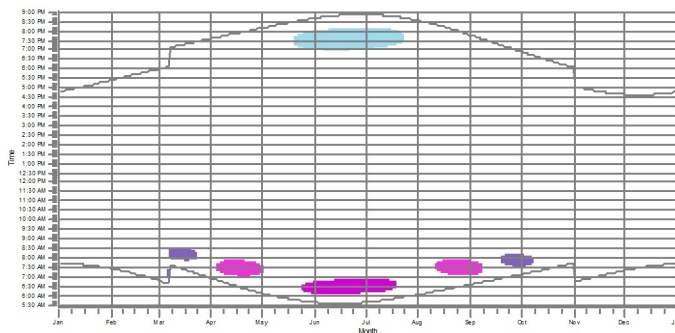
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Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar, graphical

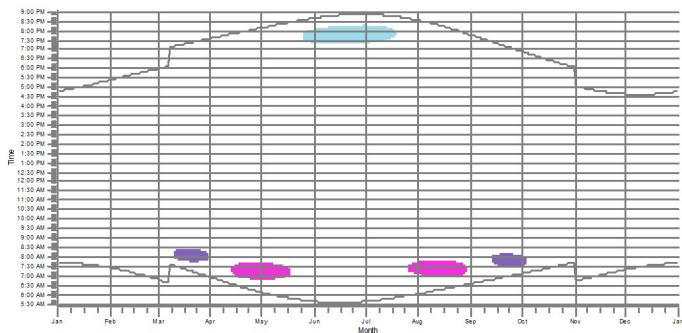
425: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (446)



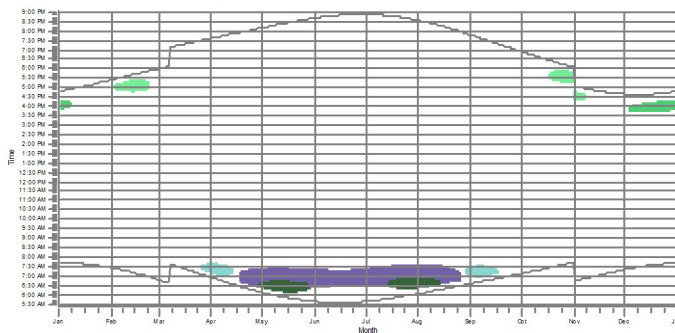
426: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (447)



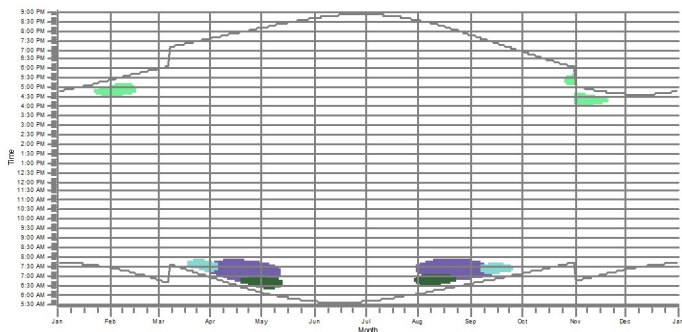
427: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (448)



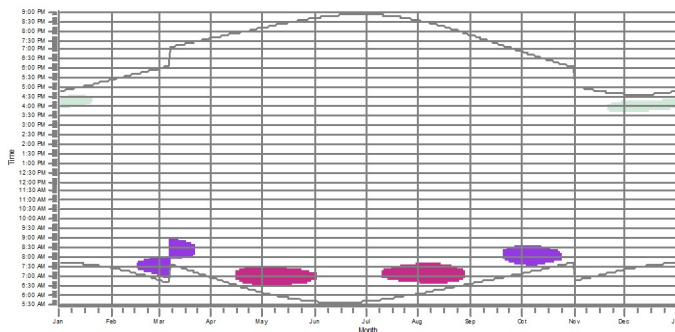
542: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (461)



544: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (462)



547: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (463)



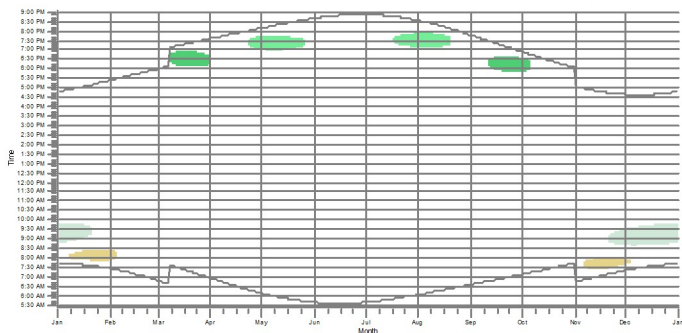
- WTGs
- | | | | |
|--|--|--|--|
| T36: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (102) | T47: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (110) | T66: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (124) | T88: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (146) |
| T40: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (104) | T59: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (117) | T74: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (132) | T91: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (149) |
| T44: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (107) | T62: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (120) | T75: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (133) | |
| T46: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (109) | T64: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (122) | T79: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (137) | |

Project:
Baron_SFA

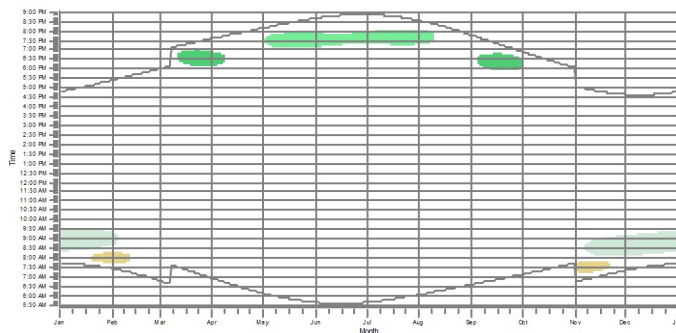
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Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar, graphical

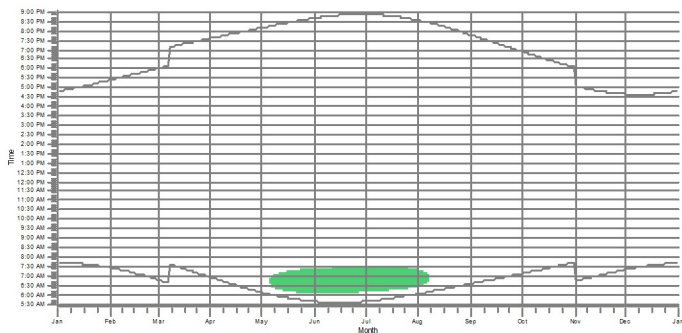
561: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (467)



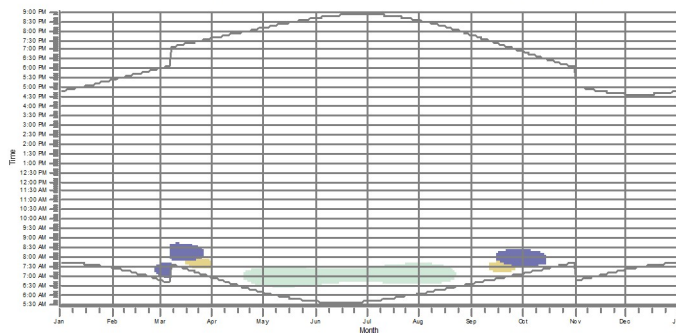
564: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (468)



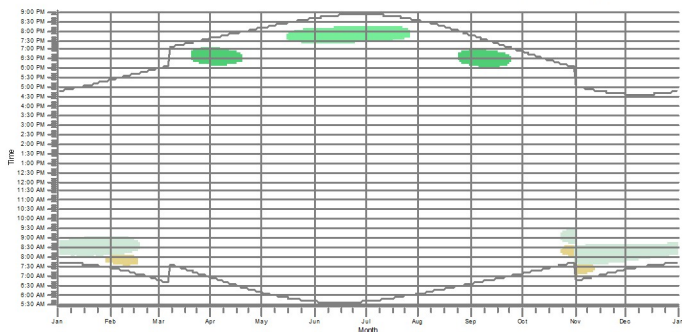
570: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (470)



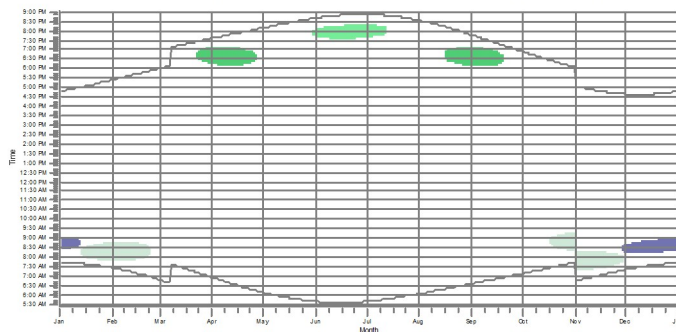
574: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (472)



576: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (474)



578: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (475)



WTGs

T35: SENVI/N 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (102)
T40: SENVI/N 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (104)

T76: SENVI/N 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (134)
T79: SENVI/N 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (137)

T87: SENVI/N 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (145)

Project:
Baron_SFA

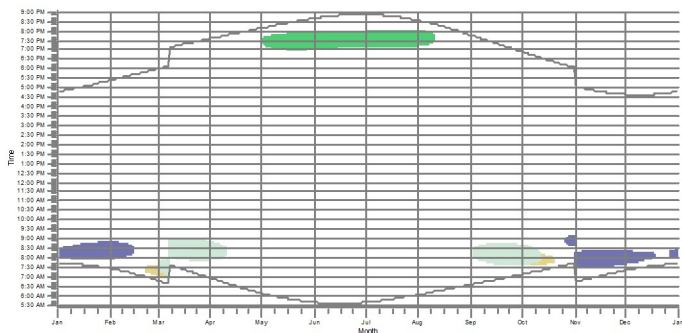
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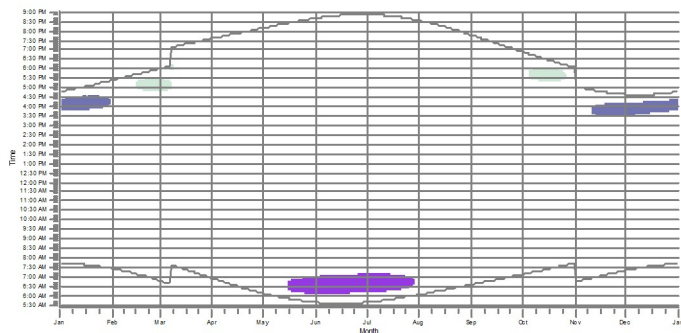
Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar, graphical

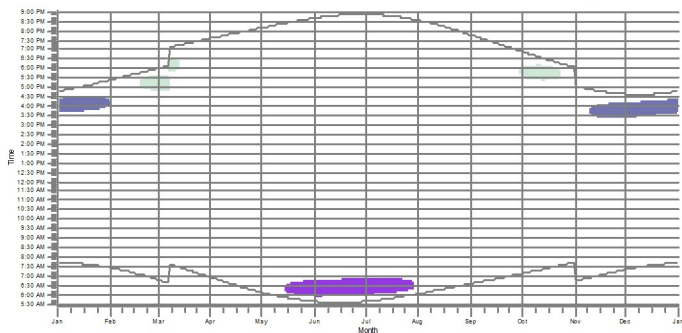
583: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (476)



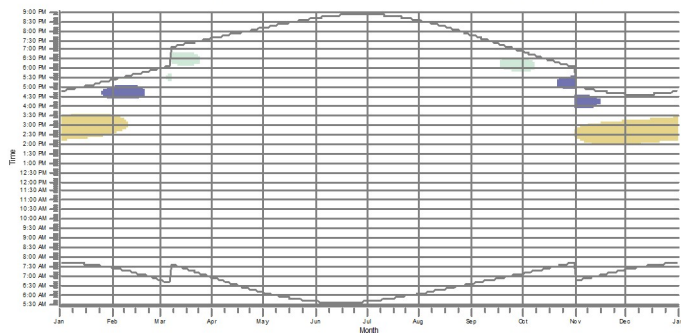
584: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (477)



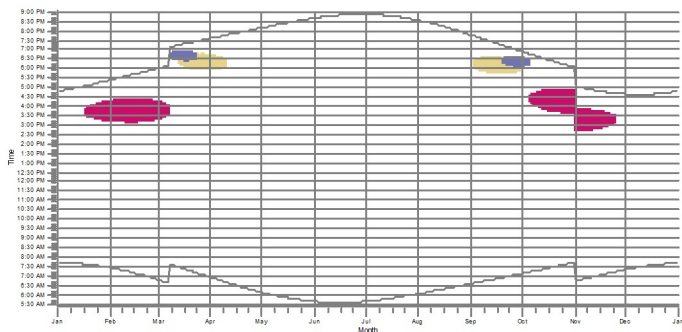
585: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (478)



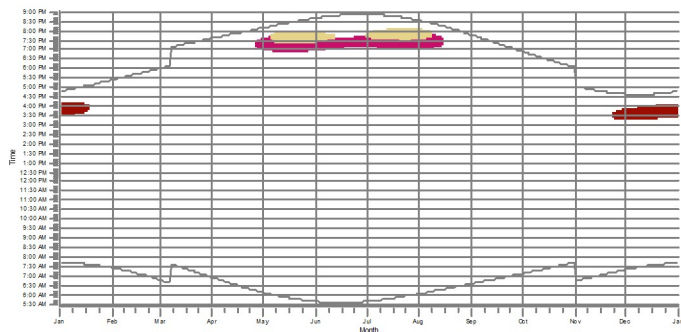
589: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (481)



592: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (483)



604: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (493)



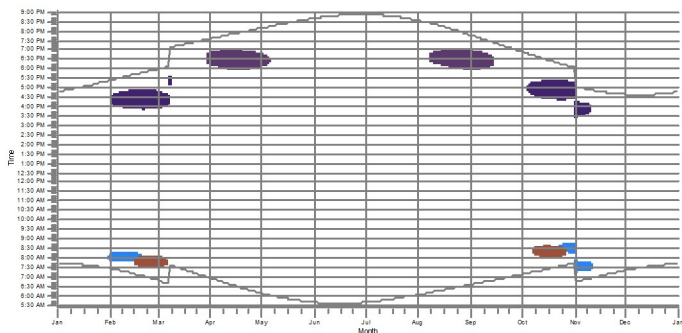
<p>WTGs</p> <p>T40: SENVI'ON 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (104)</p> <p>T64: SENVI'ON 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (122)</p>	<p>T68: SENVI'ON 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (126)</p> <p>T69: SENVI'ON 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (127)</p>	<p>T76: SENVI'ON 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (134)</p> <p>T79: SENVI'ON 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (137)</p>	<p>T87: SENVI'ON 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (145)</p>
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Project:
Baron_SFA

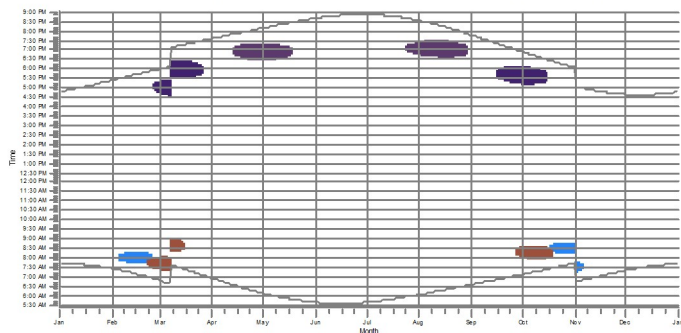
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Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar, graphical

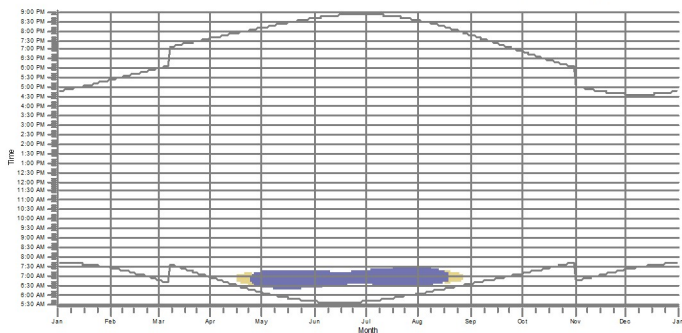
648: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (504)



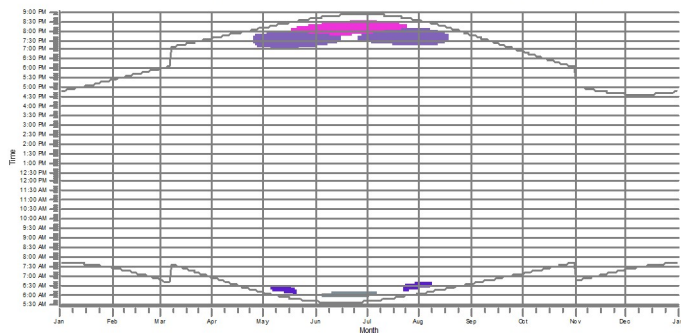
650: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (506)



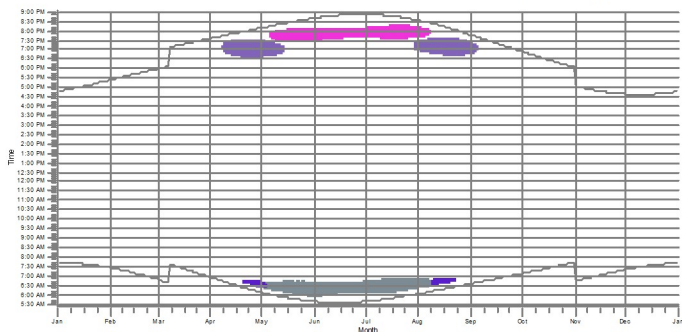
687: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (521)



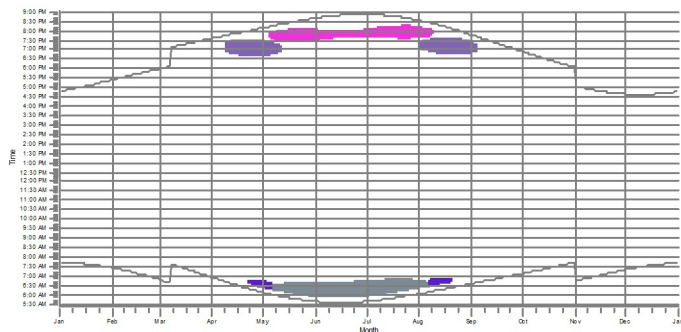
768: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (549)



769: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (550)



770: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (551)



- WTGs
- T44: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (107)
 - T47: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (110)
 - T52: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (114)
 - T53: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (115)
 - T55: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (116)
 - T60: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (118)
 - T76: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (134)
 - T81: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (139)
 - T86: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (144)
 - T87: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (145)

Project:
Baron_SFA

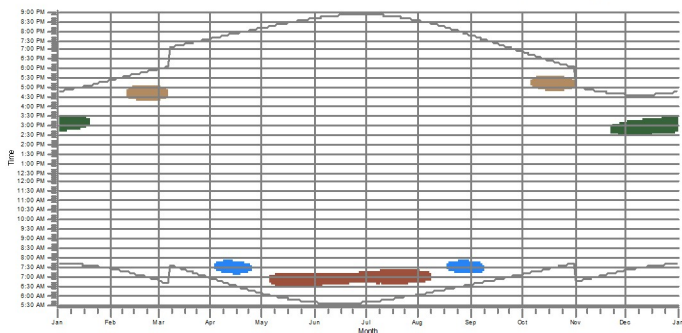
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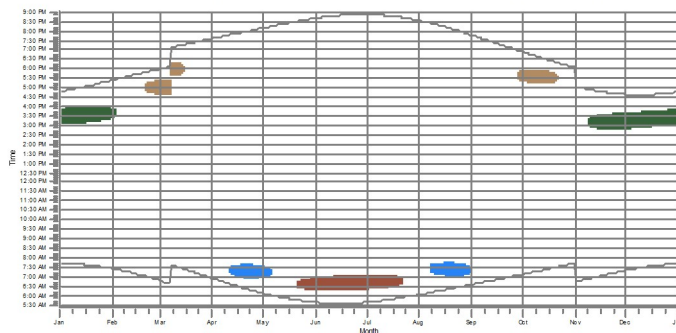
Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar, graphical

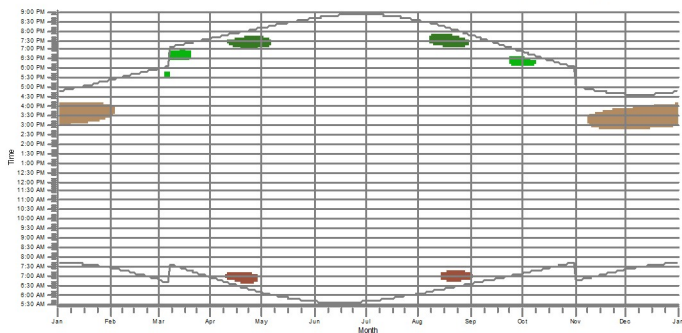
806: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (567)



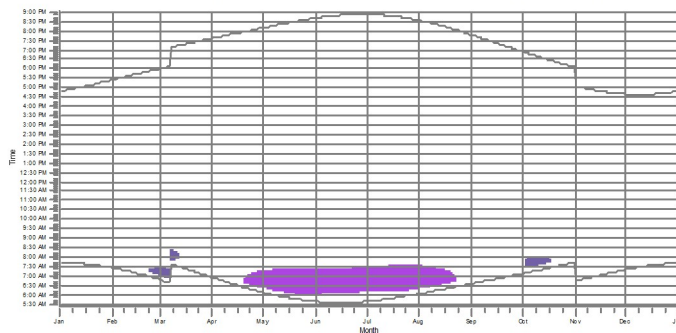
807: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (568)



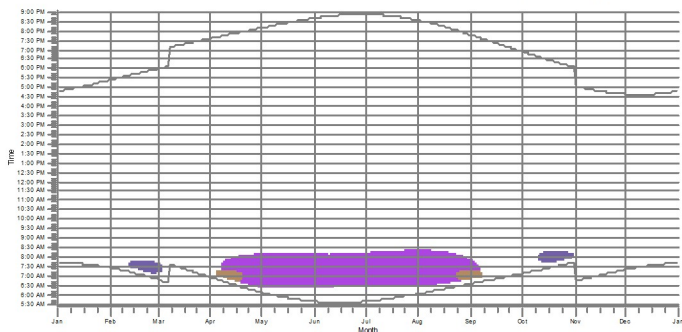
811: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (570)



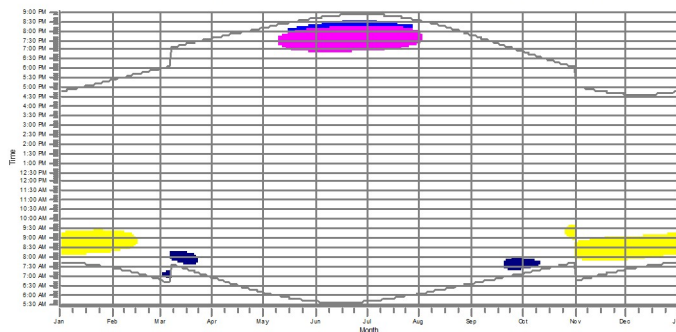
836: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (575)



837: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (576)



851: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (585)



- | | | | |
|--|---|--|---|
| ■ WT05 | ■ T2: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (78) | ■ T7: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (83) | ■ T83: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (141) |
| ■ T3: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (79) | ■ T5: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (81) | ■ T53: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (115) | ■ T89: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (147) |
| | | ■ T56: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (116) | ■ T91: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (149) |
| | | ■ T61: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (119) | |
| | | ■ T62: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (120) | |
| | | ■ T72: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (130) | |

Project:
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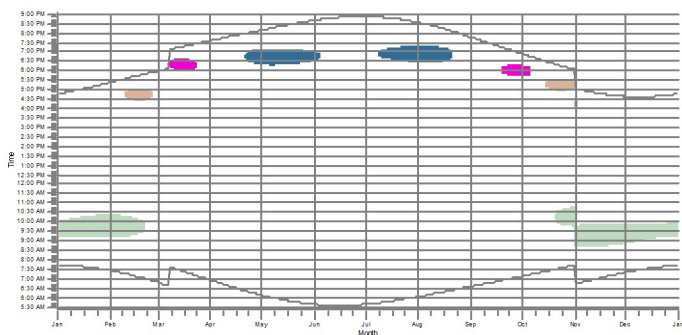
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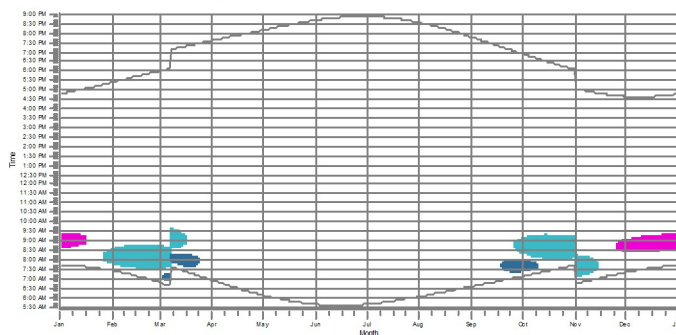
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10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar, graphical

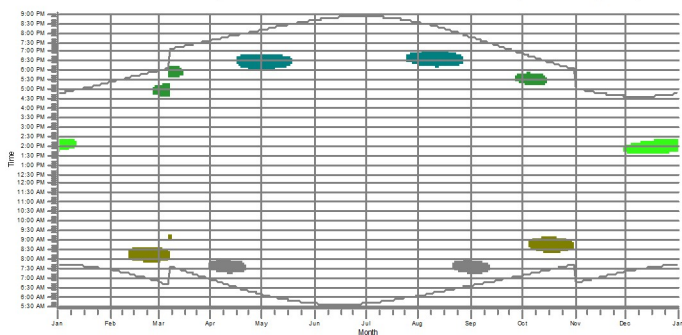
907: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (608)



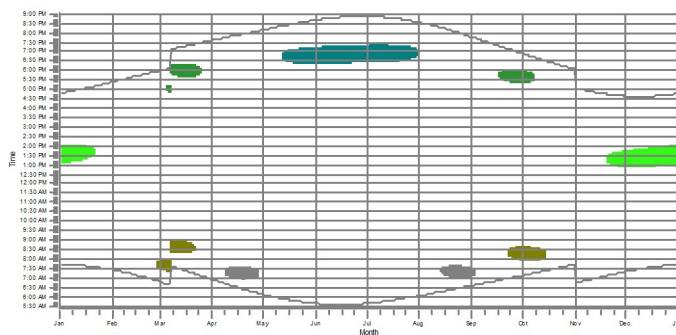
912: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (610)



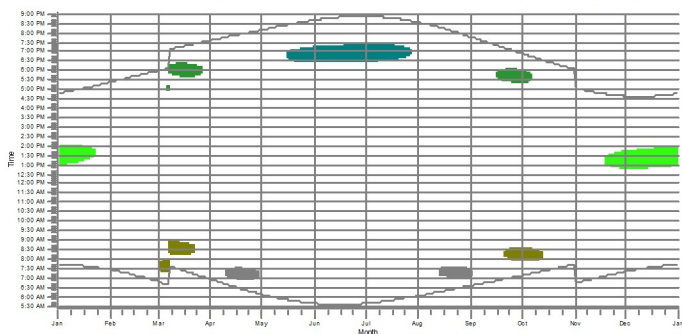
966: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (632)



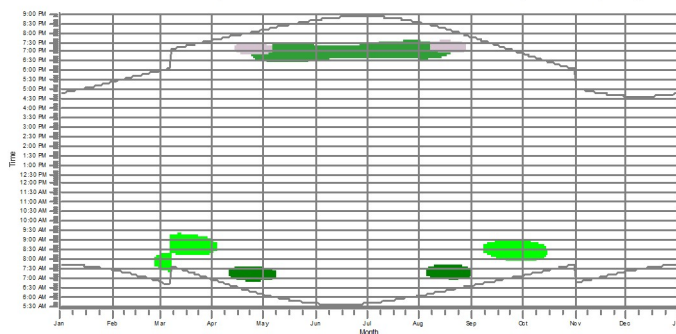
967: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (633)



968: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (634)



977: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (636)



WTGs

- | | | | |
|--|---|--|--|
| T1: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (77) | T11: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (86) | T24: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (95) | T34: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (101) |
| T4: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (80) | T17: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (90) | T26: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (96) | T37: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (103) |
| T6: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (82) | T21: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (89) | T29: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (98) | |
| T9: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (85) | T22: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (84) | T33: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (100) | |

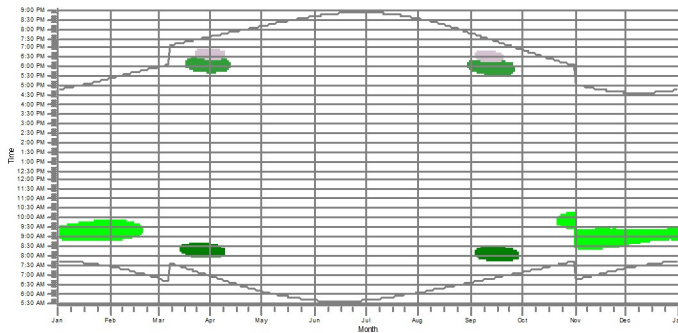
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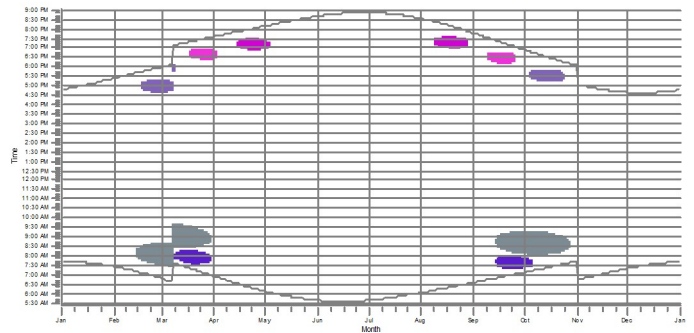
Calculated:
10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar, graphical

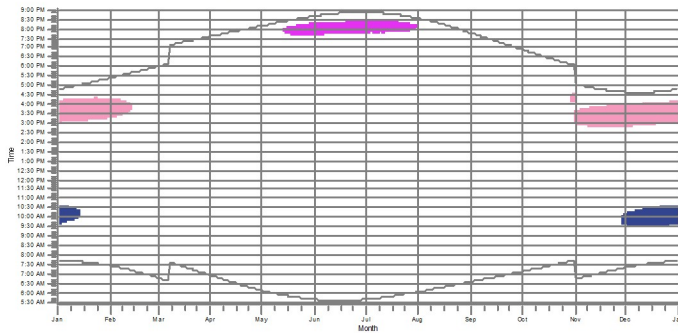
979: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (637)



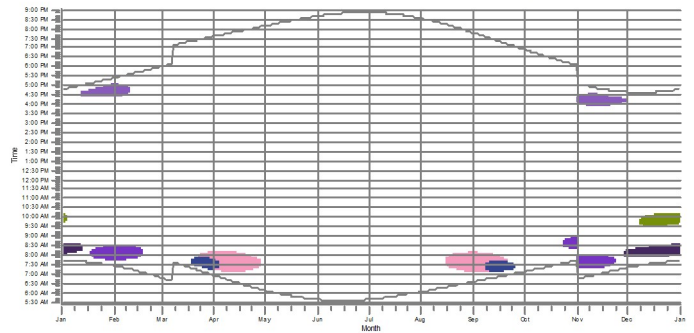
991: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (643)



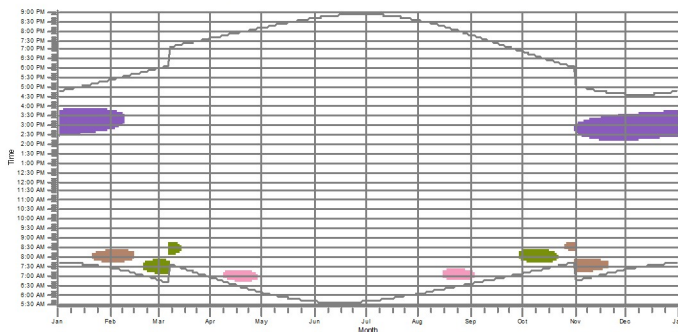
2616: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (676)



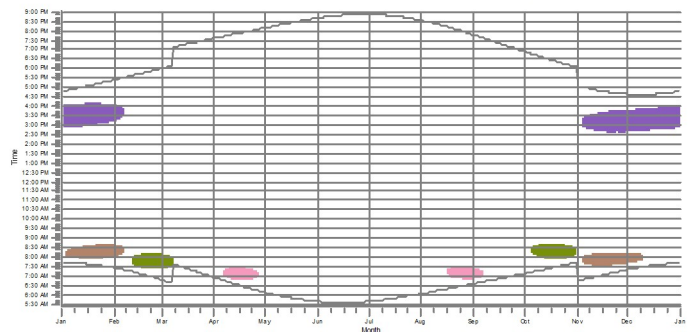
2620: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (677)



2627: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (679)



2629: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (680)



WTGs

- T1: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (77)
- T9: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (85)
- T26: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (96)
- T34: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (101)
- T44: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (107)

- T47: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (110)
- T52: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (114)
- T59: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (117)
- T60: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (118)
- T63: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (121)

- T66: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (123)
- T73: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (131)
- T77: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (135)
- T82: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (140)
- T85: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (143)

- T92: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (150)
- T93: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (151)

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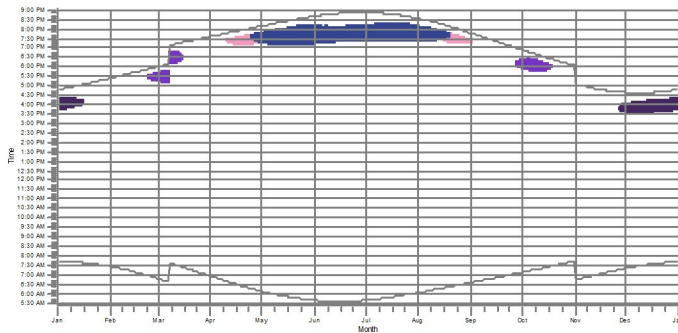
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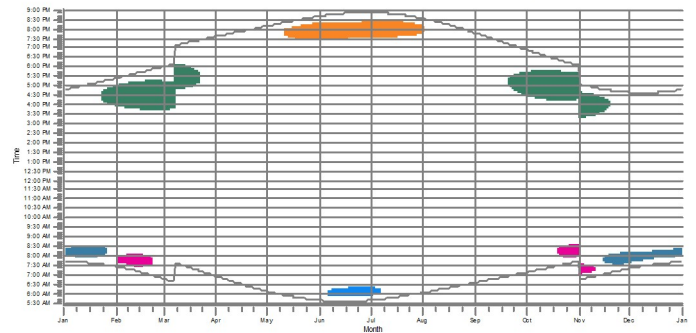
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SHADOW - Calendar, graphical

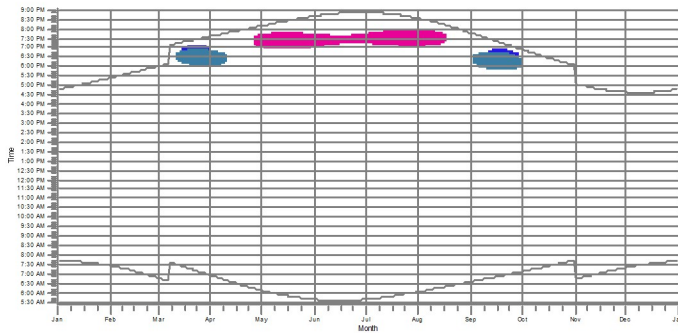
2651: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (687)



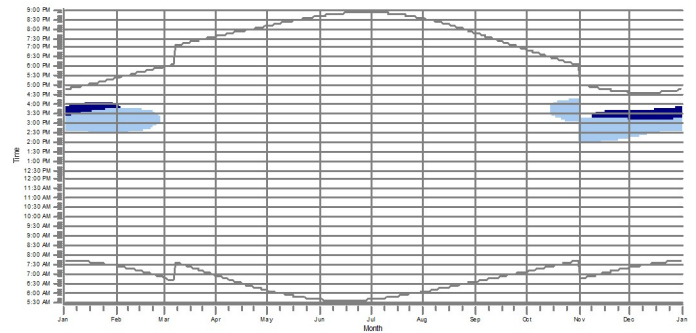
2801: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (695)



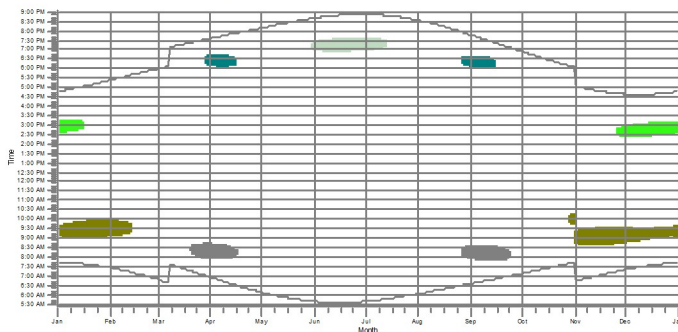
2807: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (697)



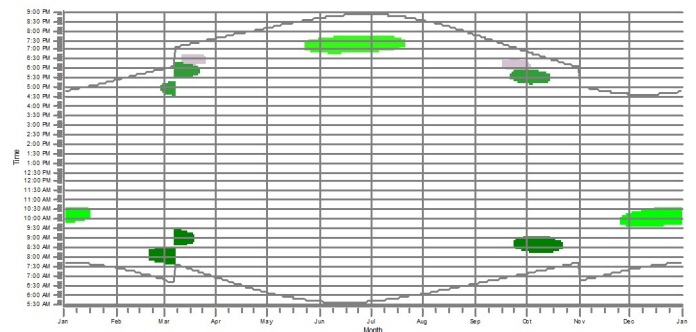
3670: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (745)



4058: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (796)



4084: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (799)



WTGs

- | | | | |
|---|--|--|--|
| T1: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (77) | T17: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (90) | T42: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (105) | T84: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (142) |
| T4: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (80) | T18: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (91) | T50: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (112) | T92: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (150) |
| T6: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (82) | T22: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (94) | T51: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (113) | T93: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (151) |
| T7: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (83) | T26: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (96) | T73: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (131) | |
| T8: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (85) | T32: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (98) | T77: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (135) | |
| T11: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (86) | T34: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (101) | T80: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (138) | |

Project:
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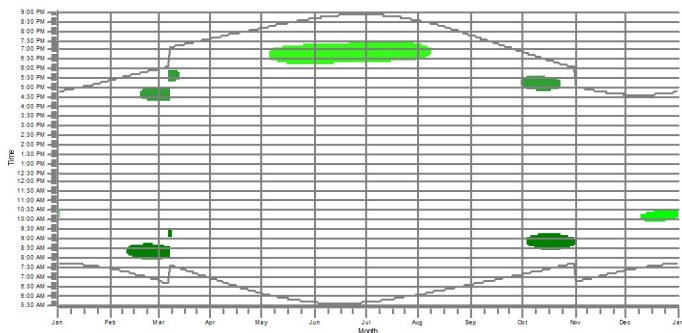
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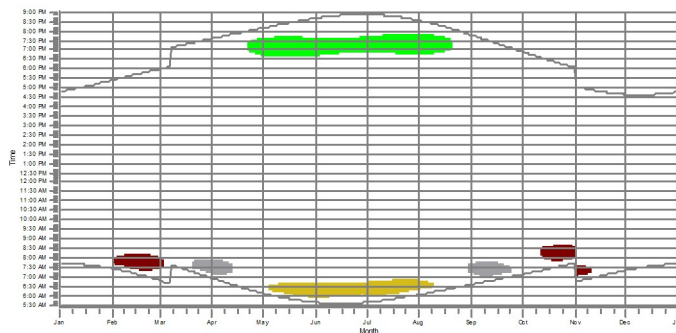
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10/10/2017 12:10 PM/2.9.285

SHADOW - Calendar, graphical

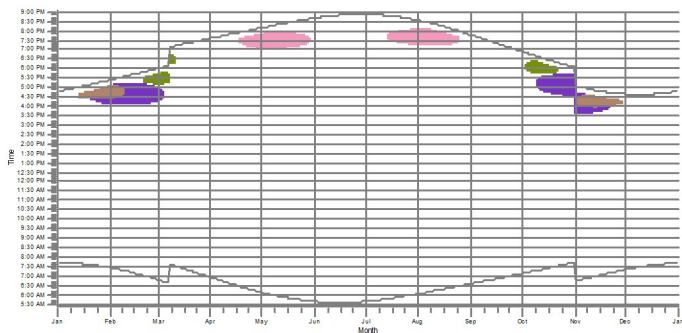
4085: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (800)



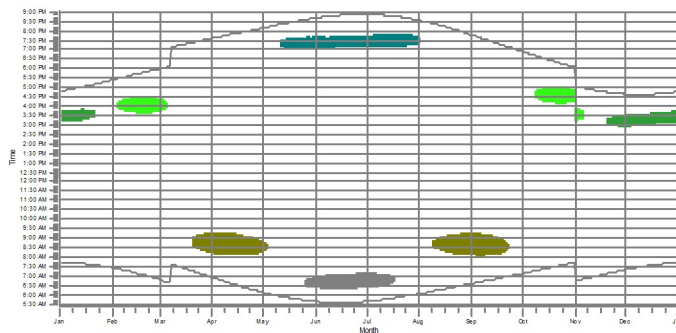
4448: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (844)



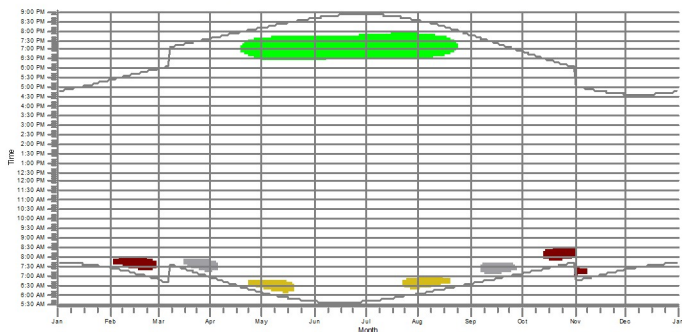
4449: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (845)



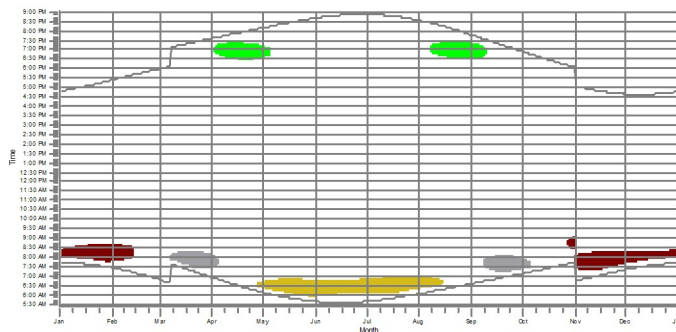
4468: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (853)



4470: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (854)



4471: Shadow Receptor: 1.0 × 1.0 Azimuth: 0.0° Slope: 0.0° (855)



WTGs

T1: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (77)
T4: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (80)
T6: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (82)
T8: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (84)

T9: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (85)
T11: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (86)
T19: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (92)
T22: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (94)

T26: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (96)
T43: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (106)
T73: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (131)
T82: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (140)

T85: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (143)
T77: SENVION 3.4M140 3700 140.0 IOI hub: 80.0 m (TOT: 150.0 m) (135)

Project:

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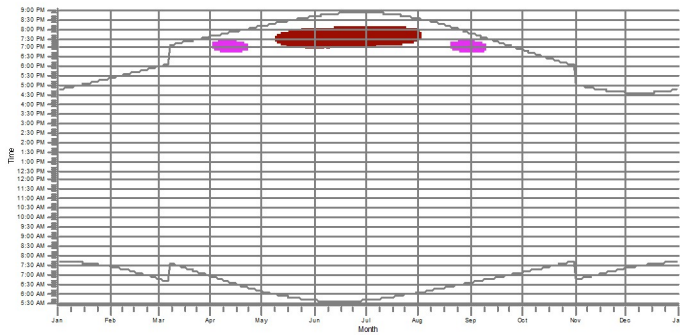
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SHADOW - Calendar, graphical

4506: Shadow Receptor: 1.0 x 1.0 Azimuth: 0.0° Slope: 0.0° (870)



WTGs

T65: SENWON 3.4M140 3700 140.0 IOR hub: 80.0 m (TOT: 150.0 m) (123)

T69: SENWON 3.4M140 3700 140.0 IOR hub: 80.0 m (TOT: 150.0 m) (127)