

SHADOW - Main Result

Assumptions for shadow calculations

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

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

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

Monthly aggregation of real case reduction

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:

DHM: Project Wizard Elevation Data Grid (Czech Republic DTM - 20m grid)

Receptor grid resolution: 1,0 m

All coordinates are in

Geo [deg]-WGS84

WTGs

	Longitude	Latitude	Z	Row data/Description	WTG type		Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
					Valid	Manufact.					Calculation distance [m]	RPM [RPM]
1	15,966427° E	49,499399° N	550,1	V1	Yes	ENERCON	E-138 EP3 E3-4 260	4 260	138,3	110,0	1 690	11,1
2	15,966344° E	49,503236° N	547,7	V2	Yes	ENERCON	E-138 EP3 E3-4 260	4 260	138,3	110,0	1 690	11,1
3	15,965461° E	49,509942° N	547,1	V3	Yes	ENERCON	E-138 EP3 E3-4 260	4 260	138,3	110,0	1 690	11,1

Shadow receptor-Input

No.	Name	Longitude	Latitude	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
				[m]	[m]	[m]	[m]	[°]		[m]
A	RB1	15,968671° E	49,515583° N	533,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
B	RB2	15,975848° E	49,511135° N	544,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
C	RB3	15,975983° E	49,510741° N	546,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
D	RB4	15,977865° E	49,509526° N	541,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
E	RB5	15,979255° E	49,509139° N	536,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
F	RB6	15,980183° E	49,508575° N	531,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
G	RB7	15,981739° E	49,507136° N	534,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
H	RB8	15,981336° E	49,505631° N	541,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
I	RB9	15,984539° E	49,503625° N	553,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
J	RB10	15,983090° E	49,502932° N	557,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
K	RB11	15,983933° E	49,492399° N	528,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
L	RB12	15,983557° E	49,492068° N	527,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
M	RB13	15,982704° E	49,491650° N	525,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
N	RB14	15,948055° E	49,493333° N	541,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
O	RB15	15,944413° E	49,494054° N	542,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
P	RB16	15,938775° E	49,500939° N	544,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0

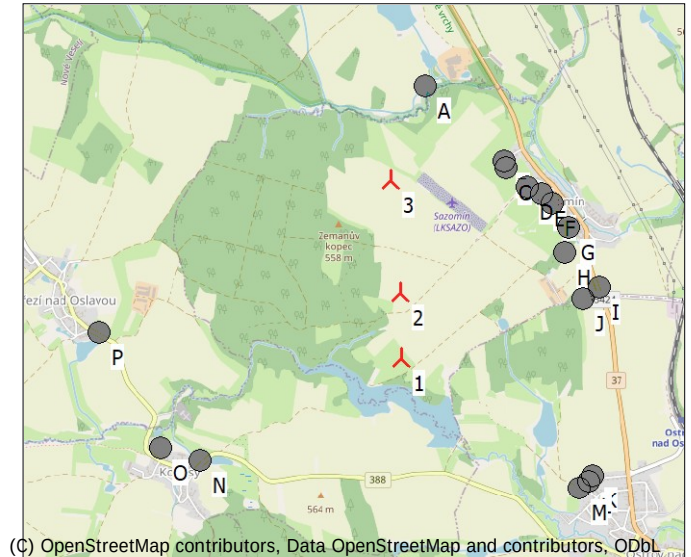
Calculation Results

Shadow receptor

Shadow, expected values

No.	Name	Shadow hours per year [h/year]
A	RB1	4:36
B	RB2	14:14
C	RB3	16:15
D	RB4	16:11

To be continued on next page...



Scale 1:50 000
New WTG
Shadow receptor

Project: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Main Result

...continued from previous page

Shadow, expected values

No.	Name	Shadow hours per year [h/year]
	E RB5	14:55
	F RB6	17:26
	G RB7	14:50
	H RB8	17:49
	I RB9	11:39
	J RB10	13:45
	K RB11	6:56
	L RB12	3:09
	M RB13	0:00
	N RB14	8:35
	O RB15	0:00
	P RB16	0:00

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

No.	Name	Expected [h/year]
1	V1	31:59
2	V2	34:23
3	V3	63:20

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

SHADOW - Calendar

Shadow receptor: A - RB1

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

			January		February	March	April	May	June	July	August	September	October	November	December
	1	07:53	13:14 (3)	07:30	06:41	06:36	05:36	04:55	04:53	05:26	06:11	06:55	06:44	07:30	
		16:07	32	13:46 (3)	16:51	17:38	19:27	20:13	20:54	21:07	20:39	19:42	18:37	16:36	16:00
	2	07:53		13:16 (3)	07:29	06:39	06:34	05:34	04:55	04:54	05:28	06:12	06:56	06:45	07:31
		16:08	30	13:46 (3)	16:53	17:40	19:28	20:14	20:55	21:07	20:37	19:40	18:35	16:35	16:00
	3	07:53		13:16 (3)	07:27	06:37	06:32	05:33	04:54	04:55	05:29	06:14	06:58	06:47	07:33
		16:09	29	13:45 (3)	16:54	17:41	19:30	20:16	20:56	21:06	20:36	19:38	18:33	16:33	15:59
	4	07:53		13:17 (3)	07:26	06:35	06:30	05:31	04:53	04:55	05:30	06:15	06:59	06:49	07:34
		16:10	28	13:45 (3)	16:56	17:43	19:31	20:17	20:57	21:06	20:34	19:36	18:31	16:31	15:59
	5	07:53		13:19 (3)	07:24	06:33	06:27	05:29	04:53	04:56	05:32	06:17	07:01	06:50	07:35
		16:11	26	13:45 (3)	16:58	17:44	19:33	20:19	20:58	21:06	20:33	19:33	18:29	16:30	15:58
	6	07:52		13:20 (3)	07:23	06:31	06:25	05:28	04:52	04:57	05:33	06:18	07:02	06:52	07:36
		16:12	23	13:43 (3)	16:59	17:46	19:34	20:20	20:59	21:05	20:31	19:31	18:27	16:28	15:58
	7	07:52		13:22 (3)	07:21	06:29	06:23	05:26	04:52	04:58	05:35	06:20	07:04	06:53	07:38
		16:13	21	13:43 (3)	17:01	17:48	19:36	20:22	20:59	21:05	20:29	19:29	18:25	16:27	15:58
	8	07:52		13:24 (3)	07:20	06:27	06:21	05:24	04:51	04:58	05:36	06:21	07:06	06:55	07:39
		16:15	19	13:43 (3)	17:03	17:49	19:37	20:23	21:00	21:04	20:28	19:27	18:22	16:25	15:57
	9	07:51		13:26 (3)	07:18	06:25	06:19	05:23	04:51	04:59	05:37	06:23	07:07	06:57	07:40
		16:16	15	13:41 (3)	17:04	17:51	19:39	20:24	21:01	21:04	20:26	19:25	18:20	16:24	15:57
	10	07:51		13:29 (3)	07:16	06:23	06:17	05:21	04:50	05:00	05:39	06:24	07:09	06:58	07:41
		16:17	9	13:38 (3)	17:06	17:52	19:41	20:26	21:02	21:03	20:24	19:23	18:18	16:22	15:57
	11	07:51			07:15	06:21	06:15	05:20	04:50	05:01	05:40	06:25	07:10	07:00	07:42
		16:19			17:08	17:54	19:42	20:27	21:02	21:02	20:23	19:21	18:16	16:21	15:57
	12	07:50			07:13	06:19	06:13	05:18	04:50	05:02	05:42	06:27	07:12	07:02	07:43
		16:20			17:10	17:56	19:44	20:29	21:03	21:02	20:21	19:19	18:14	16:19	15:57
	13	07:49			07:11	06:17	06:11	05:17	04:50	05:03	05:43	06:28	07:13	07:03	07:44
		16:21			17:11	17:57	19:45	20:30	21:04	21:01	20:19	19:16	18:12	16:18	15:57
	14	07:49			07:10	06:14	06:09	05:15	04:49	05:04	05:45	06:30	07:15	07:05	07:45
		16:23			17:13	17:59	19:47	20:32	21:04	21:00	20:17	19:14	18:10	16:17	15:57
	15	07:48			07:08	06:12	06:07	05:14	04:49	05:05	05:46	06:31	07:16	07:06	07:46
		16:24			17:15	18:00	19:48	20:33	21:05	20:59	20:15	19:12	18:08	16:15	15:57
	16	07:47			07:06	06:10	06:05	05:12	04:49	05:06	05:48	06:33	07:18	07:08	07:46
		16:25			17:16	18:02	19:50	20:34	21:05	20:58	20:14	19:10	18:06	16:14	15:57
	17	07:47			07:04	06:08	06:03	05:11	04:49	05:07	05:49	06:34	07:19	07:10	07:47
		16:27			17:18	18:03	19:51	20:36	21:06	20:57	20:12	19:08	18:04	16:13	15:57
	18	07:46			07:03	06:06	06:01	05:10	04:49	05:09	05:50	06:36	07:21	07:11	07:48
		16:28			17:20	18:05	19:53	20:37	21:06	20:56	20:10	19:05	18:02	16:12	15:58
	19	07:45			07:01	06:04	05:59	05:09	04:49	05:10	05:52	06:37	07:23	07:13	07:49
		16:30			17:21	18:07	19:54	20:38	21:06	20:55	20:08	19:03	18:00	16:11	15:58
	20	07:44			06:59	06:02	05:57	05:07	04:49	05:11	05:53	06:39	07:24	07:14	07:49
		16:31			17:23	18:08	19:56	20:40	21:07	20:54	20:06	19:01	17:58	16:10	15:58
	21	07:43			06:57	05:59	05:55	05:06	04:50	05:12	05:55	06:40	07:26	07:16	07:50
		16:33			17:25	18:10	19:57	20:41	21:07	20:53	20:04	18:59	17:56	16:08	15:59
	22	07:42			06:55	05:57	05:53	05:05	04:50	05:13	05:56	06:42	07:27	07:17	07:50
		16:35			17:26	18:11	19:59	20:42	21:07	20:52	20:02	18:57	17:54	16:07	15:59
	23	07:41			06:53	05:55	05:51	05:04	04:50	05:14	05:58	06:43	07:29	07:19	07:51
		16:36			17:28	18:13	20:00	20:44	21:07	20:51	20:00	18:55	17:52	16:06	16:00
	24	07:40			06:51	05:53	05:49	05:03	04:50	05:16	05:59	06:45	07:31	07:20	07:51
		16:38			17:30	18:14	20:02	20:45	21:07	20:50	19:58	18:52	17:51	16:06	16:00
	25	07:39			06:49	05:51	05:47	05:02	04:51	05:17	06:01	06:46	06:32	07:22	07:52
		16:39			17:31	18:16	20:03	20:46	21:08	20:48	19:56	18:50	16:49	16:05	16:01
	26	07:38			06:47	05:49	05:45	05:01	04:51	05:18	06:02	06:47	06:34	07:23	07:52
		16:41			17:33	18:17	20:05	20:47	21:08	20:47	19:54	18:48	16:47	16:04	16:02
	27	07:37			06:45	05:47	05:43	05:00	04:51	05:20	06:04	06:49	06:35	07:25	07:52
		16:43			17:35	18:19	20:07	20:48	21:08	20:46	19:52	18:46	16:45	16:03	16:02
	28	07:35			06:43	05:44	05:42	04:59	04:52	05:21	06:05	06:50	06:37	07:26	07:53
		16:44			17:36	18:21	20:08	20:50	21:07	20:45	19:50	18:44	16:43	16:02	16:03
	29	07:34				06:42	05:40	04:58	04:52	05:22	06:07	06:52	06:39	07:27	07:53
		16:46				19:22	20:10	20:51	21:07	20:43	19:48	18:42	16:41	16:02	16:04
	30	07:33				06:40	05:38	04:57	04:53	05:24	06:08	06:53	06:40	07:29	07:53
		16:48				19:24	20:11	20:52	21:07	20:42	19:46	18:39	16:40	16:01	16:05
	31	07:31				06:38		04:56		05:25	06:09		06:42		07:53
		16:49				19:25		20:53		20:40	19:44		16:38		16:06
Potential sun hours	269			283		368		411		475		486		490	
Total, worst case		232													923
Sun reduction		0,25													0,24
Oper. time red.		1,00													1,00
Wind dir. red.		1,00													1,00
Total reduction		0,25													0,24
Total, real		59													217

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: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: B - RB2

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January		February		March	April		May	June	
1	07:53		14:40 (2)	07:30	06:41	06:36		18:00 (3)	05:36	04:55
	16:07	21	15:01 (2)	16:51	17:38	19:27	17	18:17 (3)	20:13	20:54
2	07:53		14:41 (2)	07:29	06:39	06:34		18:05 (3)	05:34	04:55
	16:08	20	15:01 (2)	16:53	17:39	19:28	7	18:12 (3)	20:14	20:55
3	07:53		14:42 (2)	07:27	06:37	06:32		05:33	04:54	
	16:09	18	15:00 (2)	16:54	17:41	19:30		20:16	20:56	
4	07:53		14:43 (2)	07:26	06:35	06:29		05:31	04:53	
	16:10	17	15:00 (2)	16:56	17:43	19:31		20:17	20:57	
5	07:53		14:44 (2)	07:24	06:33	06:27		05:29	04:53	
	16:11	16	15:00 (2)	16:58	17:44	19:33		20:19	20:58	
6	07:52		14:45 (2)	07:23	06:31	06:25		05:28	04:52	
	16:12	14	14:59 (2)	16:59	17:46	19:34		20:20	20:59	
7	07:52		14:47 (2)	07:21	06:29	17:13 (3)	06:23	05:26	04:52	
	16:13	12	14:59 (2)	17:01	17:48	17:18 (3)	19:36	20:21	20:59	
8	07:52		14:49 (2)	07:20	06:27	17:07 (3)	06:21	05:24	04:51	
	16:15	8	14:57 (2)	17:03	17:49	17:24 (3)	19:37	20:23	21:00	
9	07:51			07:18	06:25	17:04 (3)	06:19	05:23	04:51	
	16:16			17:04	17:51	17:26 (3)	19:39	20:24	21:01	
10	07:51			07:16	06:23	17:02 (3)	06:17	05:21	04:50	
	16:17			17:06	17:52	17:28 (3)	19:41	20:26	21:02	
11	07:51			07:15	06:21	16:59 (3)	06:15	05:20	04:50	
	16:18			17:08	17:54	17:29 (3)	19:42	20:27	21:02	
12	07:50			07:13	06:19	16:58 (3)	06:13	05:18	04:50	
	16:20			17:10	17:56	17:30 (3)	19:44	20:29	21:03	
13	07:49			07:11	06:17	16:56 (3)	06:11	05:17	04:50	
	16:21			17:11	17:57	17:31 (3)	19:45	20:30	21:04	
14	07:49			07:10	06:14	16:55 (3)	06:09	05:15	04:49	
	16:23			17:13	17:59	17:32 (3)	19:47	20:32	21:04	
15	07:48			07:08	06:12	16:54 (3)	06:07	05:14	04:49	
	16:24			17:15	18:00	17:33 (3)	19:48	20:33	21:05	
16	07:47			07:06	06:10	16:54 (3)	06:05	05:12	04:49	
	16:25			17:16	18:02	17:33 (3)	19:50	20:34	21:05	
17	07:47			07:04	06:08	16:53 (3)	06:03	05:11	04:49	
	16:27			17:18	18:03	17:34 (3)	19:51	20:36	21:06	
18	07:46			07:02	06:06	16:52 (3)	06:01	05:10	04:49	
	16:28			17:20	18:05	17:33 (3)	19:53	20:37	21:06	
19	07:45			07:01	06:04	16:51 (3)	05:59	05:09	04:49	
	16:30			17:21	18:07	17:33 (3)	19:54	20:38	21:06	
20	07:44			06:59	06:02	16:51 (3)	05:57	05:07	04:49	
	16:31			17:23	18:08	17:33 (3)	19:56	20:40	21:07	
21	07:43			06:57	05:59	16:51 (3)	05:55	05:06	04:49	
	16:33			17:25	18:10	17:32 (3)	19:57	20:41	21:07	
22	07:42			06:55	05:57	16:51 (3)	05:53	05:05	04:50	
	16:35			17:26	18:11	17:32 (3)	19:59	20:42	21:07	
23	07:41			06:53	05:55	16:52 (3)	05:51	05:04	04:50	
	16:36			17:28	18:13	17:32 (3)	20:00	20:44	21:07	
24	07:40			06:51	05:53	16:51 (3)	05:49	05:03	04:50	
	16:38			17:30	18:14	17:30 (3)	20:02	20:45	21:07	
25	07:39			06:49	05:51	16:51 (3)	05:47	05:02	04:51	
	16:39			17:31	18:16	17:29 (3)	20:03	20:46	21:07	
26	07:38			06:47	05:49	16:52 (3)	05:45	05:01	04:51	
	16:41			17:33	18:17	17:29 (3)	20:05	20:47	21:07	
27	07:37			06:45	05:47	16:53 (3)	05:43	05:00	04:51	
	16:43			17:35	18:19	17:28 (3)	20:06	20:48	21:07	
28	07:35			06:43	05:44	16:54 (3)	05:41	04:59	04:52	
	16:44			17:36	18:21	17:26 (3)	20:08	20:49	21:07	
29	07:34				06:42	17:55 (3)	05:40	04:58	04:52	
	16:46				19:22	18:25 (3)	20:10	20:51	21:07	
30	07:33				06:40	17:57 (3)	05:38	04:57	04:53	
	16:48				19:24	18:23 (3)	20:11	20:52	21:07	
31	07:31				06:38	17:57 (3)		04:56		
	16:49				19:25	18:20 (3)		20:53		
Potential sun hours	269		283	368		411		475	486	
Total, worst case	126			830		24				
Sun reduction	0,25			0,36		0,42				
Oper. time red.	1,00			1,00		1,00				
Wind dir. red.	1,00			1,00		1,00				
Total reduction	0,25			0,36		0,42				
Total, real	32			297		10				

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

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

SHADOW - Calendar

Shadow receptor: B - RB2

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:53 21:07	05:26 20:39	06:11 19:42	06:55 18:37	17:37 (3) 18:11 (3)	06:44 16:36
2	04:54 21:07	05:28 20:37	06:12 19:40	06:56 18:35	17:37 (3) 18:08 (3)	06:45 16:00
3	04:55 21:06	05:29 20:36	06:14 19:38	06:58 18:33	17:39 (3) 18:07 (3)	06:47 15:59
4	04:55 21:06	05:30 20:34	06:15 19:36	06:59 18:31	17:40 (3) 18:04 (3)	06:48 15:59
5	04:56 21:06	05:32 20:33	06:17 19:33	07:01 18:29	17:43 (3) 18:02 (3)	06:50 15:58
6	04:57 21:05	05:33 20:31	06:18 19:31	07:02 18:27	17:45 (3) 17:57 (3)	06:52 15:58
7	04:58 21:05	05:35 20:29	06:20 19:29	07:04 18:25	06:53 16:27	07:38 15:58
8	04:58 21:04	05:36 20:28	06:21 19:27	07:06 18:22	06:55 16:25	07:39 15:57
9	04:59 21:04	05:37 20:26	06:23 19:25	07:07 18:20	06:57 16:24	07:40 15:57
10	05:00 21:03	05:39 20:24	06:24 19:23	17:59 (3) 18:04 (3)	07:09 18:18	06:58 16:22
11	05:01 21:02	05:40 20:23	06:25 19:21	17:54 (3) 18:10 (3)	07:10 18:16	07:00 16:21
12	05:02 21:02	05:42 20:21	06:27 19:18	17:50 (3) 18:12 (3)	07:12 18:14	07:01 16:19
13	05:03 21:01	05:43 20:19	06:28 19:16	17:47 (3) 18:13 (3)	07:13 18:12	07:03 16:18
14	05:04 21:00	05:45 20:17	06:30 19:14	17:46 (3) 18:15 (3)	07:15 18:10	07:05 16:17
15	05:05 20:59	05:46 20:15	06:31 19:12	17:43 (3) 18:15 (3)	07:16 18:08	07:06 16:15
16	05:06 20:58	05:48 20:14	06:33 19:10	17:42 (3) 18:17 (3)	07:18 18:06	07:08 16:14
17	05:07 20:57	05:49 20:12	06:34 19:08	17:41 (3) 18:17 (3)	07:19 18:04	07:09 16:13
18	05:09 20:56	05:50 20:10	06:36 19:05	17:40 (3) 18:18 (3)	07:21 18:02	07:11 16:12
19	05:10 20:55	05:52 20:08	06:37 19:03	17:38 (3) 18:17 (3)	07:23 18:00	07:13 16:11
20	05:11 20:54	05:53 20:06	06:39 19:01	17:37 (3) 18:17 (3)	07:24 17:58	07:14 16:09
21	05:12 20:53	05:55 20:04	06:40 18:59	17:37 (3) 18:18 (3)	07:26 17:56	07:16 16:08
22	05:13 20:52	05:56 20:02	06:42 18:57	17:36 (3) 18:17 (3)	07:27 17:54	07:17 16:07
23	05:14 20:51	05:58 20:00	06:43 18:55	17:36 (3) 18:17 (3)	07:29 17:52	07:19 16:06
24	05:16 20:50	05:59 19:58	06:44 18:52	17:35 (3) 18:16 (3)	07:31 17:51	07:20 16:06
25	05:17 20:48	06:01 19:56	06:46 18:50	17:35 (3) 18:16 (3)	06:32 16:49	07:22 16:05
26	05:18 20:47	06:02 19:54	06:47 18:48	17:35 (3) 18:15 (3)	06:34 16:47	07:23 16:04
27	05:20 20:46	06:04 19:52	06:49 18:46	17:35 (3) 18:15 (3)	06:35 16:45	07:25 16:03
28	05:21 20:44	06:05 19:50	06:50 18:44	17:35 (3) 18:14 (3)	06:37 16:43	07:26 16:02
29	05:22 20:43	06:06 19:48	06:52 18:42	17:36 (3) 18:13 (3)	06:39 16:41	07:27 16:02
30	05:24 20:42	06:08 19:46	06:53 18:39	17:36 (3) 18:11 (3)	06:40 16:40	07:29 16:01
31	05:25 20:40	06:09 19:44		06:42 16:38		07:53 16:06
Potential sun hours	490	447	379	335	275	256
Total, worst case			714	148		596
Sun reduction			0,44	0,41		0,24
Oper. time red.			1,00	1,00		1,00
Wind dir. red.			1,00	1,00		1,00
Total reduction			0,44	0,41		0,24
Total, real			314	61		140

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: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: C - RB3

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January			February		March		April			May		June	
1	07:53		14:44 (2)	07:30		06:41			06:36		18:01 (3)	05:36		04:55
	16:07	27	15:11 (2)	16:51		17:38			19:27	35	18:36 (3)	20:13		20:54
2	07:53		14:45 (2)	07:29		06:39			06:34		18:02 (3)	05:34		04:55
	16:08	27	15:12 (2)	16:53		17:39			19:28	33	18:35 (3)	20:14		20:55
3	07:53		14:44 (2)	07:27		06:37			06:32		18:03 (3)	05:33		04:54
	16:09	27	15:11 (2)	16:54		17:41			19:30	31	18:34 (3)	20:16		20:56
4	07:53		14:45 (2)	07:26		06:35			06:29		18:05 (3)	05:31		04:53
	16:10	27	15:12 (2)	16:56		17:43			19:31	27	18:32 (3)	20:17		20:57
5	07:53		14:47 (2)	07:24		06:33			06:27		18:07 (3)	05:29		04:53
	16:11	25	15:12 (2)	16:58		17:44			19:33	23	18:30 (3)	20:19		20:58
6	07:52		14:47 (2)	07:23		06:31			06:25		18:09 (3)	05:28		04:52
	16:12	24	15:11 (2)	16:59		17:46			19:34	18	18:27 (3)	20:20		20:59
7	07:52		14:48 (2)	07:21		06:29			06:23		18:13 (3)	05:26		04:52
	16:13	24	15:12 (2)	17:01		17:48			19:36	10	18:23 (3)	20:21		20:59
8	07:52		14:49 (2)	07:20		06:27			06:21			05:24		04:51
	16:15	22	15:11 (2)	17:03		17:49			19:37			20:23		21:00
9	07:51		14:50 (2)	07:18		06:25			06:19			05:23		04:51
	16:16	22	15:12 (2)	17:04		17:51			19:39			20:24		21:01
10	07:51		14:51 (2)	07:16		06:23			06:17			05:21		04:50
	16:17	20	15:11 (2)	17:06		17:52			19:41			20:26		21:02
11	07:51		14:53 (2)	07:15		06:21			06:15			05:20		04:50
	16:18	18	15:11 (2)	17:08		17:54			19:42			20:27		21:02
12	07:50		14:54 (2)	07:13		06:19			06:13			05:18		04:50
	16:20	16	15:10 (2)	17:10		17:56			19:44			20:29		21:03
13	07:49		14:56 (2)	07:11		06:17		17:17 (3)	06:11			05:17		04:50
	16:21	13	15:09 (2)	17:11		17:57	15	17:32 (3)	19:45			20:30		21:04
14	07:49		14:59 (2)	07:10		06:14		17:14 (3)	06:09			05:15		04:49
	16:23	9	15:08 (2)	17:13		17:59	20	17:34 (3)	19:47			20:32		21:04
15	07:48			07:08		06:12		17:11 (3)	06:07			05:14		04:49
	16:24			17:15		18:00	25	17:36 (3)	19:48			20:33		21:05
16	07:47			07:06		06:10		17:09 (3)	06:05			05:12		04:49
	16:25			17:16		18:02	29	17:38 (3)	19:50			20:34		21:05
17	07:47			07:04		06:08		17:08 (3)	06:03			05:11		04:49
	16:27			17:18		18:03	32	17:40 (3)	19:51			20:36		21:06
18	07:46			07:02		06:06		17:06 (3)	06:01			05:10		04:49
	16:28			17:20		18:05	34	17:40 (3)	19:53			20:37		21:06
19	07:45			07:01		06:04		17:04 (3)	05:59			05:09		04:49
	16:30			17:21		18:07	37	17:41 (3)	19:54			20:38		21:06
20	07:44			06:59		06:02		17:04 (3)	05:57			05:07		04:49
	16:31			17:23		18:08	38	17:42 (3)	19:56			20:40		21:07
21	07:43			06:57		05:59		17:03 (3)	05:55			05:06		04:49
	16:33			17:25		18:10	39	17:42 (3)	19:57			20:41		21:07
22	07:42			06:55		05:57		17:02 (3)	05:53			05:05		04:50
	16:35			17:26		18:11	40	17:42 (3)	19:59			20:42		21:07
23	07:41			06:53		05:55		17:02 (3)	05:51			05:04		04:50
	16:36			17:28		18:13	41	17:43 (3)	20:00			20:44		21:07
24	07:40			06:51		05:53		17:00 (3)	05:49			05:03		04:50
	16:38			17:30		18:14	42	17:42 (3)	20:02			20:45		21:07
25	07:39			06:49		05:51		17:00 (3)	05:47			05:02		04:51
	16:39			17:31		18:16	41	17:41 (3)	20:03			20:46		21:07
26	07:38			06:47		05:49		17:00 (3)	05:45			05:01		04:51
	16:41			17:33		18:17	41	17:41 (3)	20:05			20:47		21:07
27	07:37			06:45		05:47		17:00 (3)	05:43			05:00		04:51
	16:43			17:35		18:19	41	17:41 (3)	20:06			20:48		21:07
28	07:35			06:43		05:44		17:00 (3)	05:41			04:59		04:52
	16:44			17:36		18:21	40	17:40 (3)	20:08			20:49		21:07
29	07:34					06:42		18:01 (3)	05:40			04:58		04:52
	16:46					19:22	39	18:40 (3)	20:10			20:51		21:07
30	07:33					06:40		18:01 (3)	05:38			04:57		04:53
	16:48					19:24	38	18:39 (3)	20:11			20:52		21:07
31	07:31					06:38		18:01 (3)				04:56		
	16:49					19:25	36	18:37 (3)				20:53		
Potential sun hours	269			283		368			411			475		486
Total, worst case		301				668				177				
Sun reduction		0,25				0,36				0,42				
Oper. time red.		1,00				1,00				1,00				
Wind dir. red.		1,00				1,00				1,00				
Total reduction		0,25				0,36				0,42				
Total, real		77				239				74				

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: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: C - RB3

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December		
1	04:53	05:26	06:11	06:55	18:00 (3)	06:44	07:30	14:35 (2)
	21:07	20:39	19:42	18:37	9 18:09 (3)	16:36	16:00	18 14:53 (2)
2	04:54	05:28	06:12	06:56		06:45	07:31	14:34 (2)
	21:07	20:37	19:40	18:35		16:35	16:00	20 14:54 (2)
3	04:55	05:29	06:14	06:58		06:47	07:33	14:33 (2)
	21:06	20:36	19:38	18:33		16:33	15:59	22 14:55 (2)
4	04:55	05:30	06:15	06:59		06:48	07:34	14:34 (2)
	21:06	20:34	19:36	18:31		16:31	15:59	22 14:56 (2)
5	04:56	05:32	06:17	18:09 (3)	07:01	06:50	07:35	14:33 (2)
	21:06	20:33	19:33	10 18:19 (3)	18:29	16:30	15:58	24 14:57 (2)
6	04:57	05:33	06:18	18:05 (3)	07:02	06:52	07:36	14:33 (2)
	21:05	20:31	19:31	18 18:23 (3)	18:27	16:28	15:58	25 14:58 (2)
7	04:58	05:35	06:20	18:02 (3)	07:04	06:53	07:38	14:33 (2)
	21:05	20:29	19:29	23 18:25 (3)	18:25	16:27	15:58	25 14:58 (2)
8	04:58	05:36	06:21	17:59 (3)	07:06	06:55	07:39	14:34 (2)
	21:04	20:28	19:27	27 18:26 (3)	18:22	16:25	15:57	26 15:00 (2)
9	04:59	05:37	06:23	17:58 (3)	07:07	06:57	07:40	14:34 (2)
	21:04	20:26	19:25	30 18:28 (3)	18:20	16:24	15:57	26 15:00 (2)
10	05:00	05:39	06:24	17:56 (3)	07:09	06:58	07:41	14:34 (2)
	21:03	20:24	19:23	32 18:28 (3)	18:18	16:22	15:57	27 15:01 (2)
11	05:01	05:40	06:25	17:55 (3)	07:10	07:00	07:42	14:34 (2)
	21:02	20:23	19:21	34 18:29 (3)	18:16	16:21	15:57	28 15:02 (2)
12	05:02	05:42	06:27	17:53 (3)	07:12	07:01	07:43	14:34 (2)
	21:02	20:21	19:18	36 18:29 (3)	18:14	16:19	15:57	28 15:02 (2)
13	05:03	05:43	06:28	17:51 (3)	07:13	07:03	07:44	14:34 (2)
	21:01	20:19	19:16	38 18:29 (3)	18:12	16:18	15:57	29 15:03 (2)
14	05:04	05:45	06:30	17:51 (3)	07:15	07:05	07:45	14:35 (2)
	21:00	20:17	19:14	39 18:30 (3)	18:10	16:17	15:57	29 15:04 (2)
15	05:05	05:46	06:31	17:50 (3)	07:16	07:06	07:46	14:35 (2)
	20:59	20:15	19:12	40 18:30 (3)	18:08	16:15	15:57	29 15:04 (2)
16	05:06	05:48	06:33	17:50 (3)	07:18	07:08	07:46	14:35 (2)
	20:58	20:14	19:10	40 18:30 (3)	18:06	16:14	15:57	29 15:04 (2)
17	05:07	05:49	06:34	17:49 (3)	07:19	07:09	07:47	14:35 (2)
	20:57	20:12	19:08	41 18:30 (3)	18:04	16:13	15:57	30 15:05 (2)
18	05:09	05:50	06:36	17:49 (3)	07:21	07:11	07:48	14:36 (2)
	20:56	20:10	19:05	41 18:30 (3)	18:02	16:12	15:58	30 15:06 (2)
19	05:10	05:52	06:37	17:48 (3)	07:23	07:13	07:49	14:36 (2)
	20:55	20:08	19:03	41 18:29 (3)	18:00	16:11	15:58	29 15:05 (2)
20	05:11	05:53	06:39	17:47 (3)	07:24	07:14	07:49	14:37 (2)
	20:54	20:06	19:01	41 18:28 (3)	17:58	16:09	15:58	29 15:06 (2)
21	05:12	05:55	06:40	17:48 (3)	07:26	07:16	07:50	14:38 (2)
	20:53	20:04	18:59	40 18:28 (3)	17:56	16:08	15:59	29 15:07 (2)
22	05:13	05:56	06:42	17:47 (3)	07:27	07:17	07:50	14:38 (2)
	20:52	20:02	18:57	40 18:27 (3)	17:54	16:07	15:59	29 15:07 (2)
23	05:14	05:58	06:43	17:48 (3)	07:29	07:19	07:51	14:38 (2)
	20:51	20:00	18:55	38 18:26 (3)	17:52	16:06	16:00	29 15:07 (2)
24	05:16	05:59	06:44	17:48 (3)	07:31	07:20	07:51	14:39 (2)
	20:50	19:58	18:52	37 18:25 (3)	17:51	16:06	16:00	29 15:08 (2)
25	05:17	06:01	06:46	17:49 (3)	06:32	07:22	07:52	14:39 (2)
	20:48	19:56	18:50	35 18:24 (3)	16:49	16:05	16:01	30 15:09 (2)
26	05:18	06:02	06:47	17:49 (3)	06:34	07:23	07:52	14:39 (2)
	20:47	19:54	18:48	33 18:22 (3)	16:47	16:04	16:02	30 15:09 (2)
27	05:20	06:04	06:49	17:50 (3)	06:35	07:25	07:52	14:41 (2)
	20:46	19:52	18:46	30 18:20 (3)	16:45	16:03	16:02	29 15:10 (2)
28	05:21	06:05	06:50	17:51 (3)	06:37	07:26	07:53	14:41 (2)
	20:44	19:50	18:44	27 18:18 (3)	16:43	16:02	14:47 (2)	16:03 29 15:10 (2)
29	05:22	06:06	06:52	17:53 (3)	06:39	07:27	14:37 (2)	07:53 14:42 (2)
	20:43	19:48	18:42	23 18:16 (3)	16:41	16:02	14:50 (2)	16:04 28 15:10 (2)
30	05:24	06:08	06:53	17:55 (3)	06:40	07:29	14:35 (2)	07:53 14:42 (2)
	20:42	19:46	18:39	18 18:13 (3)	16:40	16:01	14:51 (2)	16:05 29 15:11 (2)
31	05:25	06:09		06:42			07:53	14:43 (2)
	20:40	19:44		16:38			16:06	28 15:11 (2)
Potential sun hours	490	447	379	335		275	256	
Total, worst case			852		9		844	
Sun reduction			0,44		0,41		0,21	0,24
Oper. time red.			1,00		1,00		1,00	1,00
Wind dir. red.			1,00		1,00		1,00	1,00
Total reduction			0,44		0,41		0,21	0,24
Total, real			375		4		8	199

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: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: D - RB4

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January		February		March		April		May		June	
1	07:53		15:29 (2)	07:30	15:33 (2)	06:41	06:36		18:36 (3)	05:36	04:55	
	16:07	6	15:35 (2)	16:51	15:56 (2)	17:38	19:27	26	19:02 (3)	20:13	20:54	
2	07:53		15:29 (2)	07:29	15:35 (2)	06:39	06:34		18:35 (3)	05:34	04:55	
	16:08	7	15:36 (2)	16:53	15:55 (2)	17:39	19:28	29	19:04 (3)	20:14	20:55	
3	07:53		15:28 (2)	07:27	15:37 (2)	06:37	06:32		18:34 (3)	05:33	04:54	
	16:09	9	15:37 (2)	16:54	15:53 (2)	17:41	19:30	31	19:05 (3)	20:16	20:56	
4	07:53		15:28 (2)	07:26	15:40 (2)	06:35	06:29		18:33 (3)	05:31	04:53	
	16:10	10	15:38 (2)	16:56	15:52 (2)	17:43	19:31	33	19:06 (3)	20:17	20:57	
5	07:53		15:28 (2)	07:24		06:33	06:27		18:32 (3)	05:29	04:53	
	16:11	12	15:40 (2)	16:58		17:44	19:33	34	19:06 (3)	20:19	20:58	
6	07:52		15:27 (2)	07:23		06:31	06:25		18:31 (3)	05:28	04:52	
	16:12	13	15:40 (2)	16:59		17:46	19:34	35	19:06 (3)	20:20	20:58	
7	07:52		15:27 (2)	07:21		06:29	06:23		18:31 (3)	05:26	04:52	
	16:13	15	15:42 (2)	17:01		17:48	19:36	35	19:06 (3)	20:21	20:59	
8	07:52		15:26 (2)	07:20		06:27	06:21		18:31 (3)	05:24	04:51	
	16:15	17	15:43 (2)	17:03		17:49	19:37	35	19:06 (3)	20:23	21:00	
9	07:51		15:27 (2)	07:18		06:25	06:19		18:29 (3)	05:23	04:51	
	16:16	18	15:45 (2)	17:04		17:51	19:39	36	19:05 (3)	20:24	21:01	
10	07:51		15:26 (2)	07:16		06:23	06:17		18:29 (3)	05:21	04:50	
	16:17	20	15:46 (2)	17:06		17:52	19:40	36	19:05 (3)	20:26	21:02	
11	07:51		15:27 (2)	07:15		06:21	06:15		18:29 (3)	05:20	04:50	
	16:18	21	15:48 (2)	17:08		17:54	19:42	35	19:04 (3)	20:27	21:02	
12	07:50		15:26 (2)	07:13		06:19	06:13		18:29 (3)	05:18	04:50	
	16:20	23	15:49 (2)	17:10		17:56	19:44	34	19:03 (3)	20:29	21:03	
13	07:49		15:26 (2)	07:11		06:17	06:11		18:30 (3)	05:17	04:50	
	16:21	24	15:50 (2)	17:11		17:57	19:45	33	19:03 (3)	20:30	21:04	
14	07:49		15:27 (2)	07:10		06:14	06:09		18:30 (3)	05:15	04:49	
	16:23	25	15:52 (2)	17:13		17:59	19:47	32	19:02 (3)	20:32	21:04	
15	07:48		15:26 (2)	07:08		06:12	06:07		18:31 (3)	05:14	04:49	
	16:24	28	15:54 (2)	17:15		18:00	19:48	30	19:01 (3)	20:33	21:05	
16	07:47		15:26 (2)	07:06		06:10	06:05		18:32 (3)	05:12	04:49	
	16:25	29	15:55 (2)	17:16		18:02	19:50	27	18:59 (3)	20:34	21:05	
17	07:47		15:26 (2)	07:04		06:08	06:03		18:33 (3)	05:11	04:49	
	16:27	30	15:56 (2)	17:18		18:03	19:51	25	18:58 (3)	20:36	21:06	
18	07:46		15:26 (2)	07:02		06:06	06:01		18:34 (3)	05:10	04:49	
	16:28	30	15:56 (2)	17:20		18:05	19:53	22	18:56 (3)	20:37	21:06	
19	07:45		15:26 (2)	07:01		06:04	05:59		18:37 (3)	05:09	04:49	
	16:30	31	15:57 (2)	17:21		18:07	19:54	18	18:55 (3)	20:38	21:06	
20	07:44		15:27 (2)	06:59		06:02	05:57		18:39 (3)	05:07	04:49	
	16:31	30	15:57 (2)	17:23		18:08	19:56	13	18:52 (3)	20:40	21:07	
21	07:43		15:27 (2)	06:57		05:59	05:55			05:06	04:49	
	16:33	31	15:58 (2)	17:25		18:10	19:57			20:41	21:07	
22	07:42		15:27 (2)	06:55		05:57	05:53			05:05	04:50	
	16:35	31	15:58 (2)	17:26		18:11	19:59			20:42	21:07	
23	07:41		15:28 (2)	06:53		05:55	05:51			05:04	04:50	
	16:36	31	15:59 (2)	17:28		18:13	20:00			20:43	21:07	
24	07:40		15:27 (2)	06:51		05:53	05:49			05:03	04:50	
	16:38	31	15:58 (2)	17:30		18:14	20:02			20:45	21:07	
25	07:39		15:28 (2)	06:49		05:51	05:47			05:02	04:51	
	16:39	30	15:58 (2)	17:31		18:16	20:03			20:46	21:07	
26	07:38		15:29 (2)	06:47		05:49	05:45			05:01	04:51	
	16:41	30	15:59 (2)	17:33		18:17	20:05			20:47	21:07	
27	07:37		15:29 (2)	06:45		05:47	05:43			05:00	04:51	
	16:43	29	15:58 (2)	17:35		18:19	20:06			20:48	21:07	
28	07:35		15:30 (2)	06:43		05:44	05:41			04:59	04:52	
	16:44	28	15:58 (2)	17:36		18:20	20:08			20:49	21:07	
29	07:34		15:31 (2)			06:42	18:44 (3)	05:40		04:58	04:52	
	16:46	27	15:58 (2)			19:22	18:58 (3)	20:10		20:51	21:07	
30	07:33		15:31 (2)			06:40	18:41 (3)	05:38		04:57	04:53	
	16:48	26	15:57 (2)			19:24	19:00 (3)	20:11		20:52	21:07	
31	07:31		15:32 (2)			06:38	18:38 (3)			04:56		
	16:49	25	15:57 (2)			19:25	19:00 (3)			20:53		
Potential sun hours	269		283			368		411		475		486
Total, worst case	717		71			55		599				
Sun reduction	0,25		0,34			0,36		0,42				
Oper. time red.	1,00		1,00			1,00		1,00				
Wind dir. red.	1,00		1,00			1,00		1,00				
Total reduction	0,25		0,34			0,36		0,42				
Total, real	183		24			20		251				

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)

SHADOW - Calendar

Shadow receptor: D - RB4

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:53 21:07	05:26 20:39	06:11 19:42	18:29 (3) 19:04 (3)	06:55 18:37	06:44 16:36
2	04:54 21:07	05:28 20:37	06:12 19:40	18:28 (3) 19:04 (3)	06:56 18:35	06:45 16:35
3	04:55 21:06	05:29 20:36	06:14 19:38	18:27 (3) 19:03 (3)	06:58 18:33	06:47 16:33
4	04:55 21:06	05:30 20:34	06:15 19:36	18:28 (3) 19:03 (3)	06:59 18:31	06:48 16:31
5	04:56 21:06	05:32 20:33	06:17 19:33	18:27 (3) 19:02 (3)	07:01 18:29	06:50 16:30
6	04:57 21:05	05:33 20:31	06:18 19:31	18:28 (3) 19:02 (3)	07:02 18:27	06:52 16:28
7	04:58 21:05	05:35 20:29	06:20 19:29	18:27 (3) 19:01 (3)	07:04 18:25	06:53 16:27
8	04:58 21:04	05:36 20:28	06:21 19:27	18:27 (3) 19:00 (3)	07:06 18:22	06:55 16:25
9	04:59 21:04	05:37 20:26	06:23 19:25	18:28 (3) 18:59 (3)	07:07 18:20	06:57 16:24
10	05:00 21:03	05:39 20:24	06:24 19:23	18:28 (3) 18:57 (3)	07:09 18:18	06:58 16:22
11	05:01 21:02	05:40 20:23	06:25 19:21	18:29 (3) 18:55 (3)	07:10 18:16	07:00 16:21
12	05:02 21:02	05:42 20:21	06:27 19:18	18:30 (3) 18:53 (3)	07:12 18:14	07:01 16:19
13	05:03 21:01	05:43 20:19	06:28 19:16	18:31 (3) 18:50 (3)	07:13 18:12	07:03 16:18
14	05:04 21:00	05:45 20:17	06:30 19:14	18:34 (3) 18:49 (3)	07:15 18:10	07:05 16:17
15	05:05 20:59	05:46 20:15	06:31 19:12	18:38 (3) 18:43 (3)	07:16 18:08	07:06 16:15
16	05:06 20:58	05:48 20:14	06:33 19:10		07:18 18:06	07:08 16:14
17	05:07 20:57	05:49 20:12	06:34 19:08		07:19 18:04	07:09 16:13
18	05:09 20:56	05:50 20:10	06:36 19:05		07:21 18:02	07:11 16:12
19	05:10 20:55	05:52 20:08	06:37 19:03		07:23 18:00	07:13 16:11
20	05:11 20:54	05:53 20:06	06:39 19:01		07:24 17:58	07:14 16:09
21	05:12 20:53	05:55 20:04	06:40 18:59		07:26 17:56	07:16 16:08
22	05:13 20:52	05:56 20:02	06:42 18:57		07:27 17:54	07:17 16:07
23	05:14 20:51	05:58 20:00	18:42 (3) 18:56 (3)	06:43 18:55	07:29 17:52	07:19 16:06
24	05:16 20:50	05:59 19:58	18:39 (3) 18:58 (3)	06:44 18:52	07:31 17:51	07:20 16:06
25	05:17 20:48	06:01 19:56	18:37 (3) 19:00 (3)	06:46 18:50	07:32 16:49	07:22 16:05
26	05:18 20:47	06:02 19:54	18:35 (3) 19:01 (3)	06:47 18:48	07:33 16:47	07:23 16:04
27	05:20 20:46	06:04 19:52	18:34 (3) 19:02 (3)	06:49 18:46	07:35 16:45	07:25 16:03
28	05:21 20:44	06:05 19:50	18:33 (3) 19:03 (3)	06:50 18:44	07:36 16:43	07:26 16:02
29	05:22 20:43	06:06 19:48	18:31 (3) 19:03 (3)	06:52 18:42	07:39 16:41	07:27 16:02
30	05:24 20:42	06:08 19:46	18:31 (3) 19:04 (3)	06:53 18:39	07:29 16:40	07:29 16:01
31	05:25 20:40	06:09 19:44	18:29 (3) 19:03 (3)	06:42 16:38		07:53 16:06
Potential sun hours	490	447	379	335	275	256
Total, worst case		239	426		647	161
Sun reduction		0,55	0,44		0,21	0,24
Oper. time red.		1,00	1,00		1,00	1,00
Wind dir. red.		1,00	1,00		1,00	1,00
Total reduction		0,55	0,44		0,21	0,24
Total, real		131	187		138	38

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: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: E - RB5

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	07:53 16:07 15	14:55 (1) 15:10 (1) 16:51	07:30 16:16 (2) 17:38	06:41 06:36 19:27	18:56 (3) 18:59 (3) 20:13	04:55 20:54
2	07:53 16:08 14	14:56 (1) 15:10 (1) 16:53	07:29 15:48 (2) 17:39	06:34 06:34 19:28	18:50 (3) 19:04 (3) 20:14	04:55 20:55
3	07:53 16:09 13	14:56 (1) 15:09 (1) 16:54	07:27 15:48 (2) 17:41	06:37 06:37 19:30	18:48 (3) 19:05 (3) 20:16	04:54 20:56
4	07:53 16:10 11	14:58 (1) 15:09 (1) 16:56	07:26 15:48 (2) 17:43	06:35 06:29 19:31	18:46 (3) 19:07 (3) 20:17	04:53 20:57
5	07:53 16:11 8	15:00 (1) 15:08 (1) 16:58	07:24 16:16 (2) 17:44	06:33 19:33 24	18:44 (3) 19:08 (3) 20:19	04:53 20:58
6	07:52 16:12 5	15:01 (1) 15:06 (1) 16:59	07:23 16:17 (2) 17:46	06:31 17:49 19:34	18:43 (3) 19:10 (3) 20:20	04:52 20:58
7	07:52 16:13 8	15:01 (1) 17:01 26	07:21 16:16 (2) 17:48	06:29 19:36 29	18:42 (3) 19:11 (3) 20:21	04:52 20:59
8	07:52 16:15 9	15:01 (1) 17:03 24	07:20 15:51 (2) 17:49	06:27 06:21 19:37	18:41 (3) 19:11 (3) 20:23	04:51 21:00
9	07:51 16:16 10	15:01 (1) 17:04 21	07:18 16:14 (2) 17:51	06:25 19:39 31	18:39 (3) 19:10 (3) 20:24	04:51 21:01
10	07:51 16:17 11	15:01 (1) 17:06 19	07:16 15:54 (2) 17:52	06:23 06:17 19:40	18:39 (3) 19:10 (3) 20:26	04:50 21:02
11	07:50 16:18 12	15:01 (1) 17:08 16	07:15 15:55 (2) 17:54	06:21 06:15 19:42	18:38 (3) 19:10 (3) 20:27	04:50 21:02
12	07:50 16:20 13	15:01 (1) 17:10 10	07:13 15:58 (2) 17:56	06:19 06:13 19:44	18:38 (3) 19:10 (3) 20:29	04:50 21:03
13	07:49 16:21 14	15:01 (1) 17:11 9	07:11 17:57 32	06:17 19:45 32	18:38 (3) 19:10 (3) 20:30	04:50 21:04
14	07:49 16:23 15	15:01 (1) 17:13 8	07:10 06:14 19:47	06:09 06:09 31	18:38 (3) 19:10 (3) 20:32	04:49 21:04
15	07:48 16:24 16	15:01 (1) 17:15 7	07:08 18:00 19:48	06:07 19:48 30	18:38 (3) 19:08 (3) 20:33	04:49 21:05
16	07:47 16:25 17	15:01 (1) 17:16 6	07:06 06:10 19:50	06:05 06:05 29	18:39 (3) 19:08 (3) 20:34	04:49 21:05
17	07:47 16:27 18	15:01 (1) 17:18 5	07:04 18:03 19:51	06:03 19:51 28	18:39 (3) 19:07 (3) 20:36	04:49 21:06
18	07:46 16:28 19	15:01 (1) 17:20 4	07:02 06:06 19:53	06:01 06:01 25	18:40 (3) 19:03 (3) 20:37	04:49 21:06
19	07:45 16:30 20	15:56 (2) 16:00 (2) 17:21	07:01 18:07 19:54	05:59 19:54 23	18:42 (3) 19:05 (3) 20:38	04:49 21:06
20	07:44 16:31 21	15:53 (2) 16:01 (2) 17:23	06:59 18:08 19:56	05:57 19:56 20	18:43 (3) 19:03 (3) 20:40	04:49 21:07
21	07:43 16:33 22	15:52 (2) 16:03 (2) 17:25	06:57 18:10 19:57	05:55 19:57 17	18:44 (3) 19:01 (3) 20:41	04:49 21:07
22	07:42 16:35 23	15:51 (2) 16:05 (2) 17:26	06:55 18:11 19:59	05:53 18:11 11	18:47 (3) 18:58 (3) 20:42	04:50 21:07
23	07:41 16:36 24	15:50 (2) 16:07 (2) 17:28	06:53 18:13 20:00	05:51 20:00 11	05:04 20:43 21:07	04:50 21:07
24	07:40 16:38 25	15:49 (2) 16:08 (2) 17:30	06:51 18:14 20:02	05:49 20:02 11	05:03 20:45 21:07	04:50 21:07
25	07:39 16:39 26	15:49 (2) 16:10 (2) 17:31	06:49 18:16 20:03	05:47 20:03 11	05:02 20:46 21:07	04:51 21:07
26	07:38 16:41 27	15:48 (2) 16:12 (2) 17:33	06:47 18:17 20:05	05:45 20:05 11	05:01 20:47 21:07	04:51 21:07
27	07:37 16:43 28	15:47 (2) 16:13 (2) 17:35	06:45 18:19 20:06	05:43 20:06 11	05:00 20:48 21:07	04:51 21:07
28	07:35 16:44 29	15:47 (2) 16:15 (2) 17:36	06:43 18:20 20:08	05:41 20:08 11	04:59 20:49 21:07	04:52 21:07
29	07:34 16:46 30	15:48 (2) 16:16 (2) 17:37	06:42 19:22 20:10	05:40 20:10 11	04:58 20:51 21:07	04:52 21:07
30	07:33 16:48 31	15:47 (2) 16:16 (2) 17:38	06:40 19:24 20:11	05:38 20:11 11	04:57 20:52 21:07	04:53 21:07
Potential sun hours	269	283	368	411	475	486
Total, worst case	324	285		537		
Sun reduction	0,25	0,34		0,42		
Oper. time red.	1,00	1,00		1,00		
Wind dir. red.	1,00	1,00		1,00		
Total reduction	0,25	0,34		0,42		
Total, real	82	98		225		

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

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

SHADOW - Calendar

Shadow receptor: E - RB5

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:53 21:07	05:26 20:39	06:11 19:42	18:38 (3) 19:10 (3)	06:55 18:37	15:23 (2) 16:00
2	04:54 21:07	05:28 20:37	06:12 19:40	18:38 (3) 19:09 (3)	06:56 18:35	15:21 (2) 16:00
3	04:55 21:06	05:29 20:36	06:14 19:38	18:37 (3) 19:08 (3)	06:58 18:33	15:20 (2) 15:59
4	04:55 21:06	05:30 20:34	06:15 19:36	18:38 (3) 19:08 (3)	06:59 18:31	15:20 (2) 15:59
5	04:56 21:06	05:32 20:33	06:17 19:33	18:38 (3) 19:07 (3)	07:01 18:29	15:19 (2) 15:58
6	04:57 21:05	05:33 20:31	06:18 19:31	18:39 (3) 19:06 (3)	07:02 18:27	15:18 (2) 15:58
7	04:58 21:05	05:35 20:29	06:20 19:29	18:39 (3) 19:04 (3)	07:04 18:25	15:18 (2) 15:58
8	04:58 21:04	05:36 20:28	06:21 19:27	18:40 (3) 19:01 (3)	07:05 18:22	15:18 (2) 15:57
9	04:59 21:04	05:37 20:26	06:23 19:25	18:42 (3) 19:00 (3)	07:07 18:20	15:19 (2) 15:57
10	05:00 21:03	05:39 20:24	06:24 19:23	18:43 (3) 18:57 (3)	07:09 18:18	15:18 (2) 15:57
11	05:01 21:02	05:40 20:23	06:25 19:21	18:48 (3) 18:53 (3)	07:10 18:16	15:18 (2) 15:57
12	05:02 21:01	05:42 20:21	06:27 19:18	07:12 18:14	15:19 (2) 15:47 (2)	15:57 15:00 (1)
13	05:03 21:01	05:43 20:19	06:28 19:16	07:13 18:12	15:20 (2) 15:48 (2)	15:44 15:01 (1)
14	05:04 21:00	05:45 20:17	06:30 19:14	07:15 18:10	15:19 (2) 15:47 (2)	15:45 15:02 (1)
15	05:05 20:59	05:46 20:15	06:31 19:12	07:16 18:08	15:20 (2) 15:46 (2)	15:46 15:03 (1)
16	05:06 20:58	05:48 20:14	06:33 19:10	07:18 18:06	15:21 (2) 15:45 (2)	15:46 15:03 (1)
17	05:07 20:57	05:49 20:12	06:34 19:08	07:19 18:04	15:23 (2) 15:44 (2)	15:47 15:04 (1)
18	05:09 20:56	05:50 20:10	06:36 19:05	07:21 18:02	15:23 (2) 15:42 (2)	15:48 15:05 (1)
19	05:10 20:55	05:52 20:08	06:37 19:03	07:23 18:00	15:24 (2) 15:41 (2)	15:49 15:05 (1)
20	05:11 20:54	05:53 20:06	06:39 19:01	07:24 17:58	15:26 (2) 15:40 (2)	15:49 15:05 (1)
21	05:12 20:53	05:55 20:04	18:51 (3) 19:03 (3)	06:40 18:59	07:26 17:56	15:50 15:06 (1)
22	05:13 20:52	05:56 20:02	18:49 (3) 19:06 (3)	06:42 18:57	07:27 17:54	15:50 15:06 (1)
23	05:14 20:51	05:58 20:00	18:46 (3) 19:07 (3)	06:43 18:55	07:29 17:52	15:51 15:06 (1)
24	05:16 20:50	05:59 19:58	18:44 (3) 19:08 (3)	06:44 18:52	07:31 17:51	15:51 15:08 (1)
25	05:17 20:48	06:01 19:56	18:43 (3) 19:09 (3)	06:46 18:50	07:32 16:49	15:52 15:08 (1)
26	05:18 20:47	06:02 19:54	18:42 (3) 19:09 (3)	06:47 18:48	07:23 16:47	15:52 15:08 (1)
27	05:20 20:46	06:04 19:52	18:41 (3) 19:10 (3)	06:49 18:46	07:25 16:45	15:52 15:09 (1)
28	05:21 20:44	06:05 19:50	18:40 (3) 19:10 (3)	06:50 18:44	07:26 16:43	15:53 15:09 (1)
29	05:22 20:43	06:06 19:48	18:39 (3) 19:10 (3)	06:52 18:42	07:27 16:41	15:53 15:09 (1)
30	05:24 20:42	06:08 19:46	18:39 (3) 19:11 (3)	06:53 18:39	15:27 (2) 15:38 (2)	15:53 15:09 (1)
31	05:25 20:40	06:09 19:44	18:38 (3) 19:10 (3)	06:42 16:38	15:25 (2) 15:41 (2)	15:53 15:09 (1)
Potential sun hours	490	447	379	335	275	256
Total, worst case		281	263	27	521	418
Sun reduction		0,55	0,44	0,41	0,21	0,24
Oper. time red.		1,00	1,00	1,00	1,00	1,00
Wind dir. red.		1,00	1,00	1,00	1,00	1,00
Total reduction		0,55	0,44	0,41	0,21	0,24
Total, real		154	116	11	111	98

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: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: F - RB6

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January			February			March		April		May		June
1	07:53		15:04 (1)	07:30		16:08 (2)	06:41		06:36		05:36		04:55
	16:07	24	15:28 (1)	16:51	14	16:22 (2)	17:38		19:27		20:13		20:54
2	07:53		15:03 (1)	07:29		16:07 (2)	06:39		06:34		05:34		04:55
	16:08	24	15:27 (1)	16:53	18	16:25 (2)	17:39		19:28		20:14		20:55
3	07:53		15:04 (1)	07:27		16:06 (2)	06:37		06:32		05:33		04:54
	16:09	24	15:28 (1)	16:54	20	16:26 (2)	17:41		19:30		20:16		20:56
4	07:53		15:05 (1)	07:26		16:06 (2)	06:35		06:29		05:31		04:53
	16:10	24	15:29 (1)	16:56	22	16:28 (2)	17:43		19:31		20:17		20:57
5	07:53		15:06 (1)	07:24		16:05 (2)	06:33		06:27		05:29		04:53
	16:11	23	15:29 (1)	16:58	25	16:30 (2)	17:44		19:33		20:19		20:58
6	07:52		15:06 (1)	07:23		16:05 (2)	06:31		06:25		05:28		04:52
	16:12	23	15:29 (1)	16:59	26	16:31 (2)	17:46		19:34		20:20		20:58
7	07:52		15:07 (1)	07:21		16:04 (2)	06:29		06:23		05:26		04:52
	16:13	23	15:30 (1)	17:01	27	16:31 (2)	17:48		19:36	10	19:11 (3)	20:21	20:59
8	07:52		15:07 (1)	07:20		16:04 (2)	06:27		06:21		18:58 (3)	05:24	04:51
	16:15	22	15:29 (1)	17:03	27	16:31 (2)	17:49		19:37	15	19:13 (3)	20:23	21:00
9	07:51		15:08 (1)	07:18		16:04 (2)	06:25		06:19		18:54 (3)	05:23	04:51
	16:16	22	15:30 (1)	17:04	28	16:32 (2)	17:51		19:39	20	19:14 (3)	20:24	21:01
10	07:51		15:08 (1)	07:16		16:04 (2)	06:23		06:17		18:53 (3)	05:21	04:50
	16:17	22	15:30 (1)	17:06	28	16:32 (2)	17:52		19:40	22	19:15 (3)	20:26	21:02
11	07:50		15:10 (1)	07:15		16:04 (2)	06:21		06:15		18:51 (3)	05:20	04:50
	16:18	20	15:30 (1)	17:08	28	16:32 (2)	17:54		19:42	26	19:17 (3)	20:27	21:02
12	07:50		15:10 (1)	07:13		16:04 (2)	06:19		06:13		18:50 (3)	05:18	04:50
	16:20	20	15:30 (1)	17:10	27	16:31 (2)	17:56		19:44	27	19:17 (3)	20:29	21:03
13	07:49		15:11 (1)	07:11		16:05 (2)	06:17		06:11		18:49 (3)	05:17	04:50
	16:21	18	15:29 (1)	17:11	27	16:32 (2)	17:57		19:45	29	19:18 (3)	20:30	21:04
14	07:49		15:12 (1)	07:10		16:05 (2)	06:14		06:09		18:49 (3)	05:15	04:49
	16:23	17	15:29 (1)	17:13	26	16:31 (2)	17:59		19:47	29	19:18 (3)	20:32	21:04
15	07:48		15:14 (1)	07:08		16:06 (2)	06:12		06:07		18:48 (3)	05:14	04:49
	16:24	15	15:29 (1)	17:15	24	16:30 (2)	18:00		19:48	30	19:18 (3)	20:33	21:05
16	07:47		15:15 (1)	07:06		16:07 (2)	06:10		06:05		18:48 (3)	05:12	04:49
	16:25	13	15:28 (1)	17:16	22	16:29 (2)	18:02		19:50	30	19:18 (3)	20:34	21:05
17	07:47		15:17 (1)	07:04		16:08 (2)	06:08		06:03		18:48 (3)	05:11	04:49
	16:27	10	15:27 (1)	17:18	20	16:28 (2)	18:03		19:51	29	19:17 (3)	20:36	21:06
18	07:46		15:20 (1)	07:02		16:09 (2)	06:06		06:01		18:47 (3)	05:10	04:49
	16:28	4	15:24 (1)	17:20	17	16:26 (2)	18:05		19:53	30	19:17 (3)	20:37	21:06
19	07:45			07:01		16:12 (2)	06:04		05:59		18:48 (3)	05:09	04:49
	16:30			17:21	11	16:23 (2)	18:07		19:54	29	19:17 (3)	20:38	21:06
20	07:44			06:59			06:02		05:57		18:49 (3)	05:07	04:49
	16:31			17:23			18:08		19:56	28	19:17 (3)	20:40	21:07
21	07:43			06:57			05:59		05:55		18:49 (3)	05:06	04:49
	16:33			17:25			18:10		19:57	27	19:16 (3)	20:41	21:07
22	07:42			06:55			05:57		05:53		18:49 (3)	05:05	04:50
	16:35			17:26			18:11		19:59	26	19:15 (3)	20:42	21:07
23	07:41			06:53			05:55		05:51		18:50 (3)	05:04	04:50
	16:36			17:28			18:13		20:00	23	19:13 (3)	20:43	21:07
24	07:40			06:51			05:53		05:49		18:51 (3)	05:03	04:50
	16:38			17:30			18:14		20:02	21	19:12 (3)	20:45	21:07
25	07:39			06:49			05:51		05:47		18:52 (3)	05:02	04:51
	16:39			17:31			18:16		20:03	18	19:10 (3)	20:46	21:07
26	07:38			06:47			05:49		05:45		18:55 (3)	05:01	04:51
	16:41			17:33			18:17		20:05	13	19:08 (3)	20:47	21:07
27	07:37			06:45			05:47		05:43		18:58 (3)	05:00	04:51
	16:43			17:35			18:19		20:06	7	19:05 (3)	20:48	21:07
28	07:35			06:43			05:44		05:41			04:59	04:52
	16:44			17:36			18:20		20:08			20:49	21:07
29	07:34						06:42		05:40			04:58	04:52
	16:46						19:22		20:09			20:51	21:07
30	07:33		16:12 (2)				06:40		05:38			04:57	04:53
	16:48	7	16:19 (2)				19:24		20:11			20:52	21:07
31	07:31		16:10 (2)				06:38					04:56	
	16:49	11	16:21 (2)				19:25					20:53	
Potential sun hours	269			283			368		411		475		486
Total, worst case	366			437					489				
Sun reduction	0,25			0,34					0,42				
Oper. time red.	1,00			1,00					1,00				
Wind dir. red.	1,00			1,00					1,00				
Total reduction	0,25			0,34					0,42				
Total, real	93			150					205				

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

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

SHADOW - Calendar

Shadow receptor: F - RB6

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December			
1	04:53 21:07	05:26 20:39	06:11 19:42	18:51 (3) 19:17 (3)	06:55 18:37	06:44 16:36	15:34 (2) 16:02 (2)	07:30 16:00	14:52 (1) 15:12 (1)
2	04:54 21:07	05:28 20:37	06:12 19:40	18:52 (3) 19:14 (3)	06:56 18:35	06:45 16:35	15:33 (2) 16:01 (2)	07:31 16:00	14:52 (1) 15:13 (1)
3	04:55 21:06	05:29 20:36	06:14 19:38	18:52 (3) 19:12 (3)	06:58 18:33	06:47 16:33	15:33 (2) 16:01 (2)	07:33 15:59	14:51 (1) 15:13 (1)
4	04:55 21:06	05:30 20:34	06:15 19:36	18:55 (3) 19:10 (3)	06:59 18:31	06:48 16:31	15:34 (2) 16:01 (2)	07:34 15:59	14:52 (1) 15:14 (1)
5	04:56 21:06	05:32 20:33	06:17 19:33	18:57 (3) 19:08 (3)	07:01 18:29	06:50 16:30	15:35 (2) 16:01 (2)	07:35 15:58	14:52 (1) 15:15 (1)
6	04:57 21:05	05:33 20:31	06:18 19:31		07:02 18:27	06:52 16:28	15:35 (2) 15:59 (2)	07:36 15:58	14:52 (1) 15:15 (1)
7	04:58 21:05	05:35 20:29	06:20 19:29		07:04 18:25	06:53 16:27	15:36 (2) 15:58 (2)	07:38 15:58	14:52 (1) 15:15 (1)
8	04:58 21:04	05:36 20:28	06:21 19:27		07:05 18:22	06:55 16:25	15:37 (2) 15:57 (2)	07:39 15:57	14:53 (1) 15:17 (1)
9	04:59 21:04	05:37 20:26	06:23 19:25		07:07 18:20	06:57 16:24	15:38 (2) 15:55 (2)	07:40 15:57	14:53 (1) 15:17 (1)
10	05:00 21:03	05:39 20:24	06:24 19:23		07:09 18:18	06:58 16:22	15:39 (2) 15:53 (2)	07:41 15:57	14:53 (1) 15:18 (1)
11	05:01 21:02	05:40 20:23	06:25 19:21		07:10 18:16	07:00 16:21	15:41 (2) 15:52 (2)	07:42 15:57	14:54 (1) 15:18 (1)
12	05:02 21:01	05:42 20:21	06:27 19:18		07:12 18:14	07:01 16:19	15:45 (2) 15:50 (2)	07:43 15:57	14:54 (1) 15:18 (1)
13	05:03 21:01	05:43 20:19	06:28 19:16		07:13 18:12	07:03 16:18		07:44 15:57	14:55 (1) 15:19 (1)
14	05:04 21:00	05:45 20:17	06:30 19:14		07:15 18:10	07:05 16:17		07:45 15:57	14:55 (1) 15:20 (1)
15	05:05 20:59	05:46 20:15	06:31 19:12		07:16 18:08	07:06 16:15		07:46 15:57	14:56 (1) 15:20 (1)
16	05:06 20:58	05:48 20:14	19:03 (3) 19:12 (3)	06:33 19:10	07:18 18:06	07:08 16:14		07:46 15:57	14:55 (1) 15:20 (1)
17	05:07 20:57	05:49 20:12	19:01 (3) 19:16 (3)	06:34 19:08	07:19 18:04	07:09 16:13		07:47 15:57	14:56 (1) 15:21 (1)
18	05:09 20:56	05:50 20:10	18:58 (3) 19:17 (3)	06:36 19:05	07:21 18:02	07:11 16:12		07:48 15:58	14:57 (1) 15:21 (1)
19	05:10 20:55	05:52 20:08	18:56 (3) 19:18 (3)	06:37 19:03	07:23 18:00	07:13 16:11		07:49 15:58	14:57 (1) 15:21 (1)
20	05:11 20:54	05:53 20:06	18:55 (3) 19:19 (3)	06:39 19:01	07:24 17:58	07:14 16:09		07:49 15:58	14:58 (1) 15:22 (1)
21	05:12 20:53	05:55 20:04	18:54 (3) 19:20 (3)	06:40 18:59	07:26 17:56	07:16 16:08		07:50 15:59	14:59 (1) 15:23 (1)
22	05:13 20:52	05:56 20:02	18:53 (3) 19:21 (3)	06:42 18:57	07:27 17:54	07:17 16:51 (2)		07:50 15:59	14:59 (1) 15:23 (1)
23	05:14 20:51	05:58 20:00	18:52 (3) 19:20 (3)	06:43 18:55	07:29 17:52	07:19 16:41 (2)		07:51 16:00	14:59 (1) 15:23 (1)
24	05:16 20:50	05:59 19:58	18:51 (3) 19:20 (3)	06:44 18:52	07:31 17:51	07:20 16:39 (2)	14:58 (1)	07:51 16:00	15:00 (1) 15:24 (1)
25	05:17 20:48	06:01 19:56	18:51 (3) 19:21 (3)	06:46 18:50	07:32 16:49	07:22 15:37 (2)	14:55 (1)	07:52 16:01	15:00 (1) 15:24 (1)
26	05:18 20:47	06:02 19:54	18:50 (3) 19:20 (3)	06:47 18:48	07:34 16:47	07:23 15:36 (2)	14:54 (1)	07:52 16:02	15:00 (1) 15:24 (1)
27	05:20 20:46	06:04 19:52	18:51 (3) 19:21 (3)	06:49 18:46	07:35 16:45	07:25 15:35 (2)	14:53 (1)	07:52 16:03	15:01 (1) 15:26 (1)
28	05:21 20:44	06:05 19:50	18:50 (3) 19:20 (3)	06:50 18:44	07:37 16:43	07:26 15:35 (2)	14:52 (1)	07:53 16:03	15:02 (1) 15:26 (1)
29	05:22 20:43	06:06 19:48	18:50 (3) 19:19 (3)	06:52 18:42	07:39 16:41	07:27 15:34 (2)	14:52 (1)	07:53 16:04	15:02 (1) 15:26 (1)
30	05:24 20:42	06:08 19:46	18:50 (3) 19:19 (3)	06:53 18:39	07:40 16:40	07:29 15:33 (2)	14:52 (1)	07:53 16:05	15:03 (1) 15:27 (1)
31	05:25 20:40	06:09 19:44	18:50 (3) 19:17 (3)		06:42 16:38	07:30 16:02 (2)	15:11 (1)	07:53 16:06	15:03 (1) 15:27 (1)
Potential sun hours	490	447	379	335	275	256			
Total, worst case		405	94	217	344	735			
Sun reduction		0,55	0,44	0,41	0,21	0,24			
Oper. time red.		1,00	1,00	1,00	1,00	1,00			
Wind dir. red.		1,00	1,00	1,00	1,00	1,00			
Total reduction		0,55	0,44	0,41	0,21	0,24			
Total, real		222	41	90	73	173			

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

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

SHADOW - Calendar

Shadow receptor: G - RB7

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January		February		March		April		May		June		
1	07:53		07:30	15:47 (1)	06:41	16:35 (2)	06:36		05:36	19:11 (3)	04:55		
	16:07		16:51	15	16:02 (1)	17:38	25	17:00 (2)	19:27	20:13	25	19:36 (3)	20:54
2	07:53		07:29	15:49 (1)	06:39	16:36 (2)	06:34		05:34	19:11 (3)	04:55		
	16:08		16:53	12	16:01 (1)	17:39	23	16:59 (2)	19:28	20:14	24	19:35 (3)	20:55
3	07:53		07:27	15:51 (1)	06:37	16:37 (2)	06:32		05:33	19:12 (3)	04:54		
	16:09		16:54	7	15:58 (1)	17:41	20	16:57 (2)	19:30	20:16	23	19:35 (3)	20:56
4	07:53		07:26		06:35	16:39 (2)	06:29		05:31	19:12 (3)	04:53		
	16:10		16:56		17:43	17	16:56 (2)	19:31	20:17	21	19:33 (3)	20:57	
5	07:53		07:24		06:33	16:41 (2)	06:27		05:29	19:13 (3)	04:53		
	16:11		16:58		17:44	12	16:53 (2)	19:33	20:18	19	19:32 (3)	20:58	
6	07:52		07:23		06:31		06:25		05:28	19:15 (3)	04:52		
	16:12		16:59		17:46		19:34		20:20	16	19:31 (3)	20:58	
7	07:52		07:21		06:29		06:23		05:26		19:16 (3)	04:52	
	16:13		17:01		17:48		19:36		20:21	13	19:29 (3)	20:59	
8	07:52		07:20		06:27		06:21		05:24		19:20 (3)	04:51	
	16:15		17:03		17:49		19:37		20:23	6	19:26 (3)	21:00	
9	07:51		07:18		06:25		06:19		05:23		04:51		
	16:16		17:04		17:51		19:39		20:24		21:01		
10	07:51	15:44 (1)	07:16		06:23		06:17		05:21		04:50		
	16:17	2	15:46 (1)	17:06	17:52		19:40		20:26		21:02		
11	07:50	15:44 (1)	07:15		06:21		06:15		05:20		04:50		
	16:18	4	15:48 (1)	17:08	17:54		19:42		20:27		21:02		
12	07:50	15:43 (1)	07:13		06:19		06:13		05:18		04:50		
	16:20	6	15:49 (1)	17:09	17:56		19:44		20:29		21:03		
13	07:49	15:42 (1)	07:11		06:17		06:11		05:17		04:50		
	16:21	8	15:50 (1)	17:11	17:57		19:45		20:30		21:04		
14	07:49	15:41 (1)	07:10		06:14		06:09		05:15		04:49		
	16:23	10	15:51 (1)	17:13	17:59		19:47		20:32		21:04		
15	07:48	15:41 (1)	07:08		06:12		06:07		05:14		04:49		
	16:24	13	15:54 (1)	17:15	18:00		19:48		20:33		21:05		
16	07:47	15:41 (1)	07:06	16:48 (2)	06:10		06:05		05:12		04:49		
	16:25	14	15:55 (1)	17:16	2	16:50 (2)	18:02		19:50		21:05		
17	07:47	15:41 (1)	07:04	16:43 (2)	06:08		06:03		05:11		04:49		
	16:27	16	15:57 (1)	17:18	9	16:52 (2)	18:03		19:51		21:06		
18	07:46	15:40 (1)	07:02	16:40 (2)	06:06		06:01	19:21 (3)	05:10		04:49		
	16:28	18	15:58 (1)	17:20	13	16:53 (2)	18:05	19:53	6	19:27 (3)	20:37	21:06	
19	07:45	15:40 (1)	07:01	16:39 (2)	06:04		05:59	19:19 (3)	05:09		04:49		
	16:30	20	16:00 (1)	17:21	16	16:55 (2)	18:07	19:54	10	19:29 (3)	20:38	21:06	
20	07:44	15:40 (1)	06:59	16:38 (2)	06:02		05:57	19:17 (3)	05:07		04:49		
	16:31	21	16:01 (1)	17:23	19	16:57 (2)	18:08	19:56	13	19:30 (3)	20:40	21:07	
21	07:43	15:41 (1)	06:57	16:36 (2)	05:59		05:55	19:15 (3)	05:06		04:49		
	16:33	22	16:03 (1)	17:25	23	16:59 (2)	18:10	19:57	17	19:32 (3)	20:41	21:07	
22	07:42	15:41 (1)	06:55	16:37 (2)	05:57		05:53	19:14 (3)	05:05		04:50		
	16:35	24	16:05 (1)	17:26	24	17:01 (2)	18:11	19:59	19	19:33 (3)	20:42	21:07	
23	07:41	15:40 (1)	06:53	16:36 (2)	05:55		05:51	19:12 (3)	05:04		04:50		
	16:36	24	16:04 (1)	17:28	26	17:02 (2)	18:13	20:00	22	19:34 (3)	20:43	21:07	
24	07:40	15:41 (1)	06:51	16:36 (2)	05:53		05:49	19:12 (3)	05:03		04:50		
	16:38	24	16:05 (1)	17:30	26	17:02 (2)	18:14	20:02	24	19:36 (3)	20:45	21:07	
25	07:39	15:41 (1)	06:49	16:36 (2)	05:51		05:47	19:11 (3)	05:02		04:51		
	16:39	24	16:05 (1)	17:31	26	17:02 (2)	18:16	20:03	26	19:37 (3)	20:46	21:07	
26	07:38	15:42 (1)	06:47	16:35 (2)	05:49		05:45	19:11 (3)	05:01		04:51		
	16:41	23	16:05 (1)	17:33	27	17:02 (2)	18:17	20:05	27	19:38 (3)	20:47	21:07	
27	07:36	15:42 (1)	06:45	16:36 (2)	05:47		05:43	19:11 (3)	05:00		04:51		
	16:43	23	16:05 (1)	17:35	26	17:02 (2)	18:19	20:06	26	19:37 (3)	20:48	21:07	
28	07:35	15:43 (1)	06:43	16:36 (2)	05:44		05:41	19:10 (3)	04:59		04:52		
	16:44	22	16:05 (1)	17:36	25	17:01 (2)	18:20	20:08	27	19:37 (3)	20:49	21:07	
29	07:34	15:44 (1)		06:42			05:40	19:10 (3)	04:58		04:52		
	16:46	21	16:05 (1)		19:22		20:09	26	19:36 (3)	20:51	21:07		
30	07:33	15:44 (1)		06:40			05:38	19:11 (3)	04:57		04:53		
	16:48	20	16:04 (1)	19:24			20:11	26	19:37 (3)	20:52	21:07		
31	07:31	15:46 (1)		06:38					04:56				
	16:49	18	16:04 (1)		19:25				20:53				
Potential sun hours	269		283		368		411		475		486		
Total, worst case	377		296		97		269		147				
Sun reduction	0,25		0,34		0,36		0,42		0,51				
Oper. time red.	1,00		1,00		1,00		1,00		1,00				
Wind dir. red.	1,00		1,00		1,00		1,00		1,00				
Total reduction	0,25		0,34		0,36		0,42		0,51				
Total, real	96		101		35		113		75				

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)

SHADOW - Calendar

Shadow receptor: G - RB7

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:53 21:07	05:26 20:39	06:11 19:42	06:55 18:37	06:44 16:36	07:30 16:00
2	04:54 21:07	05:28 20:37	06:12 19:40	06:56 18:35	06:45 16:35	07:31 16:00
3	04:55 21:06	05:29 20:36	06:14 19:38	06:58 18:33	06:47 16:33	07:33 15:59
4	04:55 21:06	05:30 20:34	06:15 19:36	06:59 18:31	06:48 16:31	07:34 15:59
5	04:56 21:06	05:32 20:33	19:28 (3) 19:37 (3)	06:17 19:33	07:01 18:29	07:35 15:58
6	04:57 21:05	05:33 20:31	19:26 (3) 19:40 (3)	06:18 19:31	07:02 18:27	07:36 15:58
7	04:58 21:05	05:35 20:29	19:24 (3) 19:41 (3)	06:20 19:29	07:04 18:25	07:38 15:58
8	04:58 21:04	05:36 20:28	19:22 (3) 19:42 (3)	06:21 19:27	07:05 18:22	07:39 15:57
9	04:59 21:03	05:37 20:26	19:22 (3) 19:43 (3)	06:23 19:25	07:07 18:20	07:40 15:57
10	05:00 21:03	05:39 20:24	19:20 (3) 19:44 (3)	06:24 19:23	07:09 18:18	07:41 15:57
11	05:01 21:02	05:40 20:23	19:19 (3) 19:44 (3)	06:25 19:21	07:10 18:16	07:42 15:57
12	05:02 21:01	05:42 20:21	19:19 (3) 19:45 (3)	06:27 19:18	07:12 18:14	07:43 15:57
13	05:03 21:01	05:43 20:19	19:18 (3) 19:44 (3)	06:28 19:16	07:13 18:12	07:44 15:57
14	05:04 21:00	05:45 20:17	19:19 (3) 19:45 (3)	06:30 19:14	07:15 18:10	07:45 15:57
15	05:05 20:59	05:46 20:15	19:18 (3) 19:45 (3)	06:31 19:12	07:16 18:08	07:46 15:57
16	05:06 20:58	05:48 20:14	19:17 (3) 19:44 (3)	06:33 19:10	07:18 18:06	07:46 15:57
17	05:07 20:57	05:49 20:12	19:18 (3) 19:44 (3)	06:34 19:08	07:19 18:04	07:47 15:57
18	05:09 20:56	05:50 20:10	19:17 (3) 19:43 (3)	06:36 19:05	07:21 18:02	07:48 15:58
19	05:10 20:55	05:52 20:08	19:17 (3) 19:41 (3)	06:37 19:03	07:23 18:00	07:49 15:58
20	05:11 20:54	05:53 20:06	19:18 (3) 19:40 (3)	06:39 19:01	07:24 17:58	07:49 15:58
21	05:12 20:53	05:55 20:04	19:18 (3) 19:37 (3)	06:40 18:59	07:26 17:56	07:50 15:59
22	05:13 20:52	05:56 20:02	19:20 (3) 19:36 (3)	06:42 18:57	07:27 17:54	07:50 15:59
23	05:14 20:51	05:58 20:00	19:21 (3) 19:34 (3)	06:43 18:55	07:29 17:52	07:51 16:00
24	05:16 20:50	05:59 19:58	19:22 (3) 19:32 (3)	06:44 18:52	07:31 17:51	07:51 16:00
25	05:17 20:48	06:01 19:56	19:25 (3) 19:30 (3)	06:46 18:50	07:32 16:49	07:52 16:01
26	05:18 20:47	06:02 19:54		06:47 18:48	07:23 16:04	07:52 16:02
27	05:20 20:46	06:04 19:52		06:49 18:46	07:25 16:03	07:52 16:02
28	05:21 20:44	06:05 19:50		06:50 18:44	07:26 16:02	07:53 16:03
29	05:22 20:43	06:06 19:48		06:52 18:42	07:27 16:02	07:53 16:04
30	05:24 20:42	06:08 19:46		06:53 18:39	07:29 16:01	07:53 16:05
31	05:25 20:40	06:09 19:44		06:42 16:38		07:53 16:06
Potential sun hours	490	447	379	335	275	256
Total, worst case		423		366	407	6
Sun reduction		0,55		0,41	0,21	0,24
Oper. time red.		1,00		1,00	1,00	1,00
Wind dir. red.		1,00		1,00	1,00	1,00
Total reduction		0,55		0,41	0,21	0,24
Total, real		231		151	87	1

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

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

Project: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: H - RB8

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	07:53 16:07	07:30 16:51	15:59 (1) 16:22 (1)	06:41 17:38	17:05 (2) 19:27	05:36 20:13
2	07:53 16:08	07:29 16:53	16:00 (1) 16:25 (1)	06:39 17:39	17:02 (2) 19:28	05:34 20:14
3	07:53 16:09	07:27 16:54	15:59 (1) 16:25 (1)	06:37 17:41	17:00 (2) 19:30	05:33 20:16
4	07:53 16:10	07:26 16:56	16:00 (1) 16:26 (1)	06:35 17:43	16:59 (2) 19:31	05:31 20:17
5	07:53 16:11	07:24 16:58	16:00 (1) 16:25 (1)	06:33 17:44	16:58 (2) 19:33	05:29 20:18
6	07:52 16:12	07:23 16:59	16:01 (1) 16:26 (1)	06:31 17:46	16:57 (2) 19:34	05:28 20:20
7	07:52 16:13	07:21 17:01	16:01 (1) 16:25 (1)	06:29 17:48	16:56 (2) 19:36	05:26 20:21
8	07:52 16:15	07:20 17:03	16:01 (1) 16:24 (1)	06:27 17:49	16:56 (2) 19:37	05:24 20:23
9	07:51 16:16	07:18 17:04	16:02 (1) 16:24 (1)	06:25 17:51	16:56 (2) 19:39	05:23 20:24
10	07:51 16:17	07:16 17:06	16:03 (1) 16:23 (1)	06:23 17:52	16:56 (2) 19:40	05:21 20:26
11	07:50 16:18	07:15 17:08	16:04 (1) 16:22 (1)	06:21 17:54	16:55 (2) 19:42	05:20 20:27
12	07:50 16:20	07:13 17:10	16:06 (1) 16:20 (1)	06:19 17:56	16:55 (2) 19:44	05:18 20:29
13	07:49 16:21	07:11 17:11	16:09 (1) 16:18 (1)	06:17 17:57	16:55 (2) 19:45	05:17 20:30
14	07:49 16:23	07:10 17:13	06:14 17:59	16:56 (2) 17:59	06:09 17:20 (2)	05:15 19:47
15	07:48 16:24	07:08 17:15	06:12 18:00	16:57 (2) 17:19 (2)	06:07 19:48	05:14 20:33
16	07:47 16:25	07:06 17:16	06:10 18:02	16:59 (2) 17:18 (2)	06:05 19:50	05:12 20:34
17	07:47 16:27	07:04 17:18	06:08 18:03	17:01 (2) 17:15 (2)	06:03 19:51	05:11 20:36
18	07:46 16:28	07:02 17:20	06:06 18:05	17:03 (2) 17:11 (2)	06:01 19:53	05:10 20:37
19	07:45 16:30	07:01 17:21	06:04 18:07	05:59 19:54	05:09 20:38	05:09 20:41
20	07:44 16:31	06:59 17:23	06:02 18:08	05:57 19:56	05:07 20:40	05:07 20:42
21	07:43 16:33	06:57 17:25	05:59 18:10	05:55 19:57	05:06 20:41	05:06 20:43
22	07:42 16:35	06:55 17:26	05:57 18:11	05:53 19:59	05:05 20:42	05:05 20:44
23	07:41 16:36	06:53 17:28	05:55 18:13	05:51 20:00	05:04 20:43	05:04 20:45
24	07:40 16:38	16:06 (1) 16:08 (1)	06:51 17:30	05:49 20:02	05:03 20:45	05:03 20:47
25	07:39 16:39	16:04 (1) 16:10 (1)	06:49 17:31	05:47 20:03	05:02 20:46	05:02 20:48
26	07:38 16:41	16:03 (1) 16:12 (1)	06:47 17:33	05:45 20:05	05:01 20:47	05:01 20:49
27	07:36 16:43	9 16:01 (1)	06:45 17:35	05:43 20:06	05:00 20:48	05:00 20:50
28	07:35 16:44	12 16:13 (1)	06:43 17:36	05:41 20:08	04:59 20:49	04:59 20:51
29	07:34 16:46	14 16:15 (1)	06:42 17:36	05:40 20:09	04:58 20:51	04:58 20:53
30	07:33 16:48	16 16:17 (1)	06:40 17:37	05:38 20:11	05:07 20:52	05:07 20:54
31	07:31 16:49	19 16:19 (1)	06:38 17:38	05:36 20:13	05:05 20:53	05:05 20:55
Potential sun hours	269	283	368	411	475	486
Total, worst case	99	280	380		528	
Sun reduction	0,25	0,34	0,36		0,51	
Oper. time red.	1,00	1,00	1,00		1,00	
Wind dir. red.	1,00	1,00	1,00		1,00	
Total reduction	0,25	0,34	0,36		0,51	
Total, real	25	96	136		268	

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)

SHADOW - Calendar

Shadow receptor: H - RB8

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July			August			September			October			November			December	
1	04:53			05:26	19:45 (3)	06:11			06:55	17:35 (2)	06:44	15:33 (1)	07:30				
	21:07			20:39	25 20:10 (3)	19:42			18:37	27 18:02 (2)	16:36	20 15:53 (1)	16:00				
2	04:54			05:28	19:45 (3)	06:12			06:56	17:34 (2)	06:45	15:31 (1)	07:31				
	21:07			20:37	24 20:09 (3)	19:40			18:35	27 18:01 (2)	16:35	22 15:53 (1)	16:00				
3	04:55			05:29	19:46 (3)	06:14			06:58	17:33 (2)	06:47	15:31 (1)	07:33				
	21:06			20:36	22 20:08 (3)	19:38			18:33	29 18:02 (2)	16:33	23 15:54 (1)	15:59				
4	04:55			05:30	19:46 (3)	06:15			06:59	17:32 (2)	06:48	15:30 (1)	07:34				
	21:06			20:34	20 20:06 (3)	19:36			18:31	29 18:01 (2)	16:31	25 15:55 (1)	15:59				
5	04:56			05:32	19:47 (3)	06:17			07:01	17:33 (2)	06:50	15:30 (1)	07:35				
	21:06			20:33	17 20:04 (3)	19:33			18:29	28 18:01 (2)	16:30	26 15:56 (1)	15:58				
6	04:57			05:33	19:48 (3)	06:18			07:02	17:32 (2)	06:52	15:29 (1)	07:36				
	21:05			20:31	16 20:04 (3)	19:31			18:27	28 18:00 (2)	16:28	26 15:55 (1)	15:58				
7	04:58			05:35	19:48 (3)	06:20			07:04	17:33 (2)	06:53	15:30 (1)	07:38				
	21:05			20:29	14 20:02 (3)	19:29			18:25	25 17:58 (2)	16:27	25 15:55 (1)	15:58				
8	04:58			05:36	19:49 (3)	06:21			07:05	17:32 (2)	06:55	15:30 (1)	07:39				
	21:04			20:28	11 20:00 (3)	19:27			18:22	24 17:56 (2)	16:25	26 15:56 (1)	15:57				
9	04:59			05:37	19:51 (3)	06:23			07:07	17:33 (2)	06:57	15:30 (1)	07:40				
	21:03			20:26	8 19:59 (3)	19:25			18:20	21 17:54 (2)	16:24	25 15:55 (1)	15:57				
10	05:00			05:39	19:53 (3)	06:24			07:09	17:35 (2)	06:58	15:30 (1)	07:41				
	21:03			20:24	4 19:57 (3)	19:23			18:18	17 17:52 (2)	16:22	23 15:53 (1)	15:57				
11	05:01			05:40		06:25			07:10	17:35 (2)	07:00	15:31 (1)	07:42				
	21:02			20:23		19:21			18:16	14 17:49 (2)	16:21	21 15:52 (1)	15:57				
12	05:02			05:42		06:27			07:12	17:37 (2)	07:01	15:32 (1)	07:43				
	21:01			20:21		19:18			18:14	11 17:48 (2)	16:19	18 15:50 (1)	15:57				
13	05:03			05:43		06:28			07:13	17:40 (2)	07:03	15:33 (1)	07:44				
	21:01			20:19		19:16			18:12	5 17:45 (2)	16:18	16 15:49 (1)	15:57				
14	05:04		19:55 (3)	05:45		06:30			07:15		07:05	15:33 (1)	07:45				
	21:00	6	20:01 (3)	20:17		19:14			18:10		16:17	14 15:47 (1)	15:57				
15	05:05		19:53 (3)	05:46		06:31			07:16		07:06	15:34 (1)	07:46				
	20:59	10	20:03 (3)	20:15		19:12			18:08		16:15	12 15:46 (1)	15:57				
16	05:06		19:52 (3)	05:48		06:33			07:18		07:08	15:36 (1)	07:46				
	20:58	13	20:05 (3)	20:14		19:10			18:06		16:14	9 15:45 (1)	15:57				
17	05:07		19:51 (3)	05:49		06:34			07:19		07:09	15:38 (1)	07:47				
	20:57	15	20:06 (3)	20:12		19:08			18:04		16:13	6 15:44 (1)	15:57				
18	05:09		19:50 (3)	05:50		06:36			07:21		07:11	15:40 (1)	07:48				
	20:56	17	20:07 (3)	20:10		19:05			18:02		16:12	2 15:42 (1)	15:58				
19	05:10		19:49 (3)	05:52		06:37			07:23		07:13		07:49				
	20:55	19	20:08 (3)	20:08		19:03			18:00		16:11		15:58				
20	05:11		19:48 (3)	05:53		06:39			07:24		07:14		07:49				
	20:54	20	20:08 (3)	20:06		19:01			17:58		16:09		15:58				
21	05:12		19:48 (3)	05:55		06:40			07:26		07:16		07:50				
	20:53	22	20:10 (3)	20:04		18:59			17:56		16:08		15:59				
22	05:13		19:48 (3)	05:56		06:42			07:27		07:17		07:50				
	20:52	22	20:10 (3)	20:02		18:57			17:54		16:07		15:59				
23	05:14		19:47 (3)	05:58		06:43			07:29		07:19		07:51				
	20:51	24	20:11 (3)	20:00		18:55			17:52		16:06		16:00				
24	05:16		19:46 (3)	05:59		06:44			07:31		07:20		07:51				
	20:50	25	20:11 (3)	19:58		18:52			17:51		16:06		16:00				
25	05:17		19:46 (3)	06:01		06:46		17:49 (2)	06:32		07:22		07:52				
	20:48	25	20:11 (3)	19:56		18:50	3	17:52 (2)	16:49		16:05		16:01				
26	05:18		19:46 (3)	06:02		06:47		17:43 (2)	06:34		07:23		07:52				
	20:47	26	20:12 (3)	19:54		18:48	13	17:56 (2)	16:47		16:04		16:02				
27	05:20		19:46 (3)	06:04		06:49		17:41 (2)	06:35		07:25		07:52				
	20:46	26	20:12 (3)	19:52		18:46	18	17:59 (2)	16:45		16:03		16:02				
28	05:21		19:45 (3)	06:05		06:50		17:38 (2)	06:37		07:26		07:53				
	20:44	27	20:12 (3)	19:50		18:44	21	17:59 (2)	16:43		16:02		16:03				
29	05:22		19:45 (3)	06:06		06:52		17:37 (2)	06:39		15:37 (1)	07:27	07:53				
	20:43	27	20:12 (3)	19:48		18:42	24	18:01 (2)	16:41	11	15:48 (1)	16:02	16:04				
30	05:24		19:46 (3)	06:08		06:53		17:35 (2)	06:40		15:35 (1)	07:29	07:53				
	20:42	27	20:13 (3)	19:46		18:39	26	18:01 (2)	16:40	15	15:50 (1)	16:01	16:05				
31	05:25		19:46 (3)	06:09					06:42		15:34 (1)		07:53				
	20:40	26	20:12 (3)	19:44					16:38	18	15:52 (1)		16:06				
Potential sun hours	490			447			379		335		275		256				
Total, worst case	377			161			105		329		339						
Sun reduction	0,53			0,55			0,44		0,41		0,21						
Oper. time red.	1,00			1,00			1,00		1,00		1,00						
Wind dir. red.	1,00			1,00			1,00		1,00		1,00						
Total reduction	0,53			0,55			0,44		0,41		0,21						
Total, real	202			88			46		136		72						

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

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

SHADOW - Calendar

Shadow receptor: I - RB9

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	07:53 16:07	07:30 16:51	06:41 17:38	16:47 (1) 17:06 (1)	06:36 19:27	18:35 (2) 20:12
2	07:53 16:08	07:29 16:53	06:39 17:39	16:48 (1) 17:04 (1)	06:34 19:28	18:50 (2) 20:14
3	07:53 16:09	07:27 16:54	06:37 17:41	16:50 (1) 17:02 (1)	06:32 19:30	18:37 (2) 20:15
4	07:53 16:10	07:26 16:56	06:35 17:43	16:54 (1) 16:58 (1)	06:29 19:31	18:47 (2) 20:16
5	07:53 16:11	07:24 16:58	06:33 17:44	06:27 19:33	05:33 20:15	20:14 20:56
6	07:52 16:12	07:23 16:59	06:31 17:46	06:25 19:34	05:28 20:20	20:53 20:58
7	07:52 16:13	07:21 17:01	06:29 17:48	06:23 19:36	05:26 20:21	20:57 20:59
8	07:52 16:15	07:20 17:03	06:27 17:49	06:21 19:37	05:24 20:23	20:58 21:00
9	07:51 16:16	07:18 17:04	06:25 17:51	06:19 19:39	05:23 20:24	20:59 21:01
10	07:51 16:17	07:16 17:06	06:23 17:52	06:17 19:40	05:21 20:26	21:02 21:02
11	07:50 16:18	07:15 17:08	06:21 17:54	06:15 19:42	05:20 20:27	21:03 21:02
12	07:50 16:20	07:13 17:09	06:19 17:56	06:13 19:44	05:18 20:29	19:59 (3) 20:00 (3)
13	07:49 16:21	07:11 17:11	06:16 17:57	06:11 19:45	05:17 20:30	20:01 (3) 20:02 (3)
14	07:49 16:23	07:10 17:13	06:14 17:59	06:09 19:47	05:15 20:31	20:03 (3) 20:04 (3)
15	07:48 16:24	07:08 17:15	06:12 18:00	06:07 19:48	05:14 20:33	20:05 (3) 20:06 (3)
16	07:47 16:25	07:06 17:16	06:10 18:02	06:05 19:50	05:12 20:34	20:07 (3) 20:08 (3)
17	07:47 16:27	07:04 17:18	06:08 18:03	06:03 19:51	05:11 20:36	20:09 (3) 20:07 (3)
18	07:46 16:28	07:02 17:20	06:06 18:05	06:01 19:53	05:10 20:37	20:08 (3) 20:09 (3)
19	07:45 16:30	07:01 17:21	06:04 18:07	05:59 17:41 (2)	05:09 20:38	20:10 (3) 20:09 (3)
20	07:44 16:31	06:59 17:23	06:02 18:08	05:57 17:44 (2)	05:07 20:40	20:11 (3) 20:10 (3)
21	07:43 16:33	06:57 17:25	05:59 18:10	05:55 17:46 (2)	05:06 20:41	20:12 (3) 20:12 (3)
22	07:42 16:35	06:55 17:26	05:57 18:11	05:53 17:47 (2)	05:05 20:42	20:13 (3) 20:13 (3)
23	07:41 16:36	06:53 17:28	05:55 18:13	05:51 17:49 (2)	05:04 20:43	20:14 (3) 20:14 (3)
24	07:40 16:38	06:51 17:30	05:53 18:14	05:49 17:50 (2)	05:03 20:45	20:15 (3) 20:15 (3)
25	07:39 16:39	06:49 17:31	05:51 18:16	05:47 17:51 (2)	05:02 20:46	20:16 (3) 20:16 (3)
26	07:38 16:41	06:47 17:33	05:49 18:17	05:45 17:52 (2)	05:01 20:47	20:17 (3) 20:17 (3)
27	07:36 16:43	06:45 17:35	05:47 18:19	05:43 17:55 (2)	05:00 20:48	20:18 (3) 20:16 (3)
28	07:35 16:44	06:43 17:36	05:44 18:20	05:41 17:56 (2)	04:59 20:49	20:19 (3) 20:17 (3)
29	07:34 16:46		05:42 19:22	05:40 18:33 (2)	04:58 20:51	20:18 (3) 20:16 (3)
30	07:33 16:48		05:40 19:24	05:38 18:34 (2)	04:57 20:52	20:19 (3) 20:16 (3)
31	07:31 16:49		05:38 19:25	05:36 18:52 (2)	04:56 20:53	20:17 (3) 20:15 (3)
Potential sun hours	269	283	368	411	475	486
Total, worst case		165	255	25	279	59
Sun reduction		0,34	0,36	0,42	0,51	0,46
Oper. time red.		1,00	1,00	1,00	1,00	1,00
Wind dir. red.		1,00	1,00	1,00	1,00	1,00
Total reduction		0,34	0,36	0,42	0,51	0,46
Total, real		57	91	10	142	27

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: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: I - RB9

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:53 21:07	05:26 20:39	06:11 19:42	06:55 18:37	06:44 16:36	07:30 16:00
2	04:54 21:07	05:28 20:37	06:12 19:40	06:56 18:35	06:45 16:35	07:31 16:00
3	04:55 21:06	05:29 20:36	06:14 19:38	06:58 18:33	06:47 16:33	07:33 15:59
4	04:55 21:06	05:30 20:34	06:15 19:36	06:59 18:31	06:48 16:31	07:34 15:59
5	04:56 21:06	05:32 20:33	06:17 19:33	07:01 18:29	06:50 16:30	07:35 15:58
6	04:57 21:05	05:33 20:31	06:18 19:31	07:02 18:27	06:52 16:28	07:36 15:58
7	04:58 21:05	05:35 20:29	06:20 19:29	07:04 18:25	06:53 16:27	07:38 15:58
8	04:58 21:04	05:36 20:28	06:21 19:27	07:05 18:22	06:55 16:25	07:39 15:57
9	04:59 21:03	05:37 20:26	06:23 19:25	07:07 18:20	06:57 16:24	07:40 15:57
10	05:00 21:03	05:39 20:24	06:24 19:23	07:09 18:18	06:58 17:27 (1)	07:41 15:57
11	05:01 21:02	05:40 20:23	06:25 19:21	07:10 18:16	06:59 17:23 (1)	07:42 15:57
12	05:02 21:01	05:42 20:21	06:27 19:18	07:12 18:14	07:01 17:39 (1)	07:43 15:57
13	05:03 21:01	05:43 20:19	06:28 19:16	07:13 18:12	07:03 17:39 (1)	07:44 15:57
14	05:04 21:00	05:45 20:17	06:30 19:14	07:15 18:10	07:05 17:19 (1)	07:45 15:57
15	05:05 20:59	05:46 20:15	06:31 19:12	07:16 18:08	07:06 17:41 (1)	07:46 15:57
16	05:06 20:58	05:48 20:13	06:33 19:10	07:18 18:06	07:08 17:17 (1)	07:46 15:57
17	05:07 20:57	05:49 20:12	06:34 19:08	07:19 18:04	07:09 17:39 (1)	07:47 15:57
18	05:09 20:56	05:50 20:10	06:36 19:05	07:21 18:02	07:11 17:36 (1)	07:48 15:58
19	05:10 20:55	05:52 20:08	06:37 19:03	07:23 18:00	07:13 17:18 (1)	07:49 15:58
20	05:11 20:54	05:53 20:06	06:39 19:01	07:24 17:58	07:14 17:33 (1)	07:49 15:58
21	05:12 20:53	05:55 20:04	06:40 18:59	07:26 17:56	07:16 17:29 (1)	07:50 15:59
22	05:13 20:52	05:56 20:02	06:42 18:57	07:27 17:54	07:17 17:19 (1)	07:50 15:59
23	05:14 20:51	05:58 20:00	06:43 18:55	07:29 17:52	07:19 17:27 (1)	07:51 16:00
24	05:16 20:50	05:59 19:58	06:44 18:52	07:31 17:51	07:20 17:25 (1)	07:51 16:00
25	05:17 20:48	06:01 19:56	06:46 18:50	07:32 16:49	07:22 17:23 (1)	07:52 16:01
26	05:18 20:47	06:02 19:54	06:47 18:48	07:34 16:47	07:23 16:04	07:52 16:02
27	05:20 20:46	06:04 19:52	06:49 18:46	07:35 16:45	07:25 16:03	07:52 16:02
28	05:21 20:44	06:05 19:50	06:50 18:44	07:37 16:43	07:26 16:02	07:53 16:03
29	05:22 20:43	06:06 19:48	06:52 18:42	07:39 16:41	07:27 16:02	07:53 16:04
30	05:24 20:42	06:08 19:46	06:53 18:39	07:40 16:40	07:29 16:01	07:53 16:05
31	05:25 20:40	06:09 19:44	06:54 18:37	07:42 16:38	07:30 16:00	07:53 16:06
Potential sun hours	490	447	379	335	275	256
Total, worst case	338		232	216		
Sun reduction	0,53		0,44	0,41		
Oper. time red.	1,00		1,00	1,00		
Wind dir. red.	1,00		1,00	1,00		
Total reduction	0,53		0,44	0,41		
Total, real	181		102	89		

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: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: J - RB10

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	07:53 16:07	07:30 16:51	06:41 17:38	16:48 (1) 17:13 (1)	06:36 19:27	18:39 (2) 20:12
2	07:53 16:08	07:29 16:53	06:39 17:39	16:49 (1) 17:13 (1)	06:34 19:28	18:39 (2) 20:14
3	07:53 16:09	07:27 16:54	06:37 17:41	16:49 (1) 17:12 (1)	06:32 19:30	18:39 (2) 20:15
4	07:53 16:10	07:26 16:56	06:35 17:43	16:50 (1) 17:11 (1)	06:29 19:31	18:40 (2) 20:17
5	07:53 16:11	07:24 16:58	06:33 17:44	16:51 (1) 17:10 (1)	06:27 19:33	18:40 (2) 20:18
6	07:52 16:12	07:23 16:59	06:31 17:46	16:52 (1) 17:09 (1)	06:25 19:34	18:41 (2) 20:20
7	07:52 16:13	07:21 17:01	06:29 17:48	16:54 (1) 17:06 (1)	06:23 19:36	18:42 (2) 20:21
8	07:52 16:15	07:20 17:03	06:27 17:49	06:21 19:37	18:43 (2) 20:23	20:22
9	07:51 16:16	07:18 17:04	06:25 17:51	06:19 19:39	18:45 (2) 20:24	20:23
10	07:51 16:17	07:16 17:06	06:23 17:52	06:17 19:40	05:21 20:26	20:24
11	07:50 16:19	07:15 17:08	06:21 17:54	06:15 19:42	05:20 20:27	20:25
12	07:50 16:20	07:13 17:10	06:19 17:56	06:13 19:44	05:18 20:29	20:26
13	07:49 16:21	07:11 17:11	06:17 17:57	06:11 19:45	05:17 20:30	20:27
14	07:49 16:23	07:10 17:13	06:14 17:59	06:09 19:47	05:15 20:31	20:28
15	07:48 16:24	07:08 17:15	06:12 18:00	06:07 19:48	05:14 20:33	20:29
16	07:47 16:25	07:06 17:16	06:10 18:02	06:05 19:50	05:12 20:34	20:30
17	07:47 16:27	07:04 17:18	06:08 18:03	06:03 19:51	05:11 20:36	20:31
18	07:46 16:28	07:02 17:20	06:06 18:05	06:01 19:53	05:10 20:37	20:32
19	07:45 16:30	07:01 17:21	06:04 18:07	05:59 19:54	05:09 20:38	20:33
20	07:44 16:31	06:59 17:23	06:02 18:08	05:57 19:56	05:07 20:40	20:34
21	07:43 16:33	06:57 17:25	05:59 16:54 (1)	05:55 19:57	05:06 20:41	20:35
22	07:42 16:35	06:55 17:26	05:57 16:54 (1)	05:53 19:59	05:05 20:42	20:36
23	07:41 16:36	06:53 17:28	05:55 16:52 (1)	05:51 20:00	05:04 20:43	20:37
24	07:40 16:38	06:51 17:30	05:53 16:51 (1)	05:49 20:02	05:03 20:45	20:38
25	07:39 16:39	06:49 17:31	05:51 16:50 (1)	05:47 17:48 (2)	05:02 20:46	20:39
26	07:38 16:41	06:47 17:33	05:49 16:50 (1)	05:45 17:53 (2)	05:01 20:47	20:40
27	07:36 16:43	06:45 17:35	05:47 16:49 (1)	05:43 17:55 (2)	05:00 20:48	20:41
28	07:35 16:44	06:43 17:36	05:44 16:48 (1)	05:41 17:43 (2)	04:59 20:49	20:42
29	07:34 16:46	06:41 17:34	05:42 16:46 (1)	05:39 17:41 (2)	04:57 20:51	20:43
30	07:33 16:48	06:39 17:32	05:40 16:44 (1)	05:37 17:39 (2)	04:55 20:53	20:44
31	07:31 16:49	06:37 17:30	05:38 16:42 (1)	05:35 17:37 (2)	04:53 20:55	20:45
Potential sun hours	269	283	368	411	475	486
Total, worst case		116	230	187	48	540
Sun reduction		0,34	0,36	0,42	0,51	0,46
Oper. time red.		1,00	1,00	1,00	1,00	1,00
Wind dir. red.		1,00	1,00	1,00	1,00	1,00
Total reduction		0,34	0,36	0,42	0,51	0,46
Total, real		40	82	78	24	248

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

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

SHADOW - Calendar

Shadow receptor: J - RB10

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July			August		September		October			November		December	
1	04:53		20:18 (3)	05:26	06:11			06:55			06:44	07:30		
	21:07	18	20:36 (3)	20:39	19:42			18:37			16:36	16:00		
2	04:54		20:17 (3)	05:28	06:12			06:56			06:45	07:31		
	21:07	18	20:35 (3)	20:37	19:40			18:35			16:35	16:00		
3	04:55		20:18 (3)	05:29	06:14		18:43 (2)	06:58			06:47	07:33		
	21:06	17	20:35 (3)	20:36	19:38	10	18:53 (2)	18:33			16:33	15:59		
4	04:55		20:18 (3)	05:30	06:15		18:40 (2)	06:59			06:48	07:34		
	21:06	17	20:35 (3)	20:34	19:36	16	18:56 (2)	18:31			16:31	15:59		
5	04:56		20:18 (3)	05:32	06:17		18:38 (2)	07:01			06:50	07:35		
	21:06	16	20:34 (3)	20:33	19:33	19	18:57 (2)	18:29			16:30	15:58		
6	04:57		20:18 (3)	05:33	06:18		18:37 (2)	07:02		17:32 (1)	06:52	07:36		
	21:05	16	20:34 (3)	20:31	19:31	21	18:58 (2)	18:27	8	17:40 (1)	16:28	15:58		
7	04:58		20:19 (3)	05:35	06:20		18:35 (2)	07:04		17:29 (1)	06:53	07:38		
	21:05	15	20:34 (3)	20:29	19:29	24	18:59 (2)	18:25	15	17:44 (1)	16:27	15:58		
8	04:59		20:19 (3)	05:36	06:21		18:34 (2)	07:05		17:26 (1)	06:55	07:39		
	21:04	15	20:34 (3)	20:28	19:27	24	18:58 (2)	18:22	18	17:44 (1)	16:25	15:57		
9	04:59		20:20 (3)	05:37	06:23		18:33 (2)	07:07		17:25 (1)	06:57	07:40		
	21:03	13	20:33 (3)	20:26	19:25	26	18:59 (2)	18:20	21	17:46 (1)	16:24	15:57		
10	05:00		20:19 (3)	05:39	06:24		18:32 (2)	07:09		17:24 (1)	06:58	07:41		
	21:03	13	20:32 (3)	20:24	19:23	25	18:57 (2)	18:18	23	17:47 (1)	16:22	15:57		
11	05:01		20:19 (3)	05:40	06:25		18:33 (2)	07:10		17:23 (1)	07:00	07:42		
	21:02	13	20:32 (3)	20:23	19:21	22	18:55 (2)	18:16	24	17:47 (1)	16:21	15:57		
12	05:02		20:20 (3)	05:42	06:27		18:32 (2)	07:12		17:23 (1)	07:01	07:43		
	21:01	11	20:31 (3)	20:21	19:18	21	18:53 (2)	18:14	24	17:47 (1)	16:19	15:57		
13	05:03		20:20 (3)	05:43	06:28		18:31 (2)	07:13		17:21 (1)	07:03	07:44		
	21:01	10	20:30 (3)	20:19	19:16	19	18:50 (2)	18:12	24	17:45 (1)	16:18	15:57		
14	05:04		20:21 (3)	05:45	06:30		18:32 (2)	07:15		17:22 (1)	07:05	07:45		
	21:00	9	20:30 (3)	20:17	19:14	17	18:49 (2)	18:10	21	17:43 (1)	16:17	15:57		
15	05:05		20:21 (3)	05:46	06:31		18:32 (2)	07:16		17:22 (1)	07:06	07:46		
	20:59	8	20:29 (3)	20:15	19:12	14	18:46 (2)	18:08	20	17:42 (1)	16:15	15:57		
16	05:06		20:22 (3)	05:48	06:33		18:33 (2)	07:18		17:21 (1)	07:08	07:46		
	20:58	6	20:28 (3)	20:13	19:10	11	18:44 (2)	18:06	18	17:39 (1)	16:14	15:57		
17	05:07		20:22 (3)	05:49	06:34		18:34 (2)	07:19		17:22 (1)	07:09	07:47		
	20:57	5	20:27 (3)	20:12	19:08	8	18:42 (2)	18:04	15	17:37 (1)	16:13	15:57		
18	05:09		20:23 (3)	05:50	06:36		18:36 (2)	07:21		17:23 (1)	07:11	07:48		
	20:56	3	20:26 (3)	20:10	19:05	4	18:40 (2)	18:02	13	17:36 (1)	16:12	15:58		
19	05:10		20:24 (3)	05:52	06:37			07:23		17:23 (1)	07:13	07:49		
	20:55	1	20:25 (3)	20:08	19:03			18:00	10	17:33 (1)	16:11	15:58		
20	05:11			05:53	06:39			07:24		17:24 (1)	07:14	07:49		
	20:54			20:06	19:01			17:58	7	17:31 (1)	16:09	15:58		
21	05:12			05:55	06:40			07:26		17:26 (1)	07:16	07:50		
	20:53			20:04	18:59			17:56	3	17:29 (1)	16:08	15:59		
22	05:13			05:56	06:42			07:27			07:17	07:50		
	20:52			20:02	18:57			17:54			16:07	15:59		
23	05:14			05:58	06:43			07:29			07:19	07:51		
	20:51			20:00	18:55			17:52			16:06	16:00		
24	05:16			05:59	06:44			07:31			07:20	07:51		
	20:50			19:58	18:52			17:51			16:06	16:00		
25	05:17			06:01	06:46			06:32			07:22	07:52		
	20:48			19:56	18:50			16:49			16:05	16:01		
26	05:18			06:02	06:47			06:34			07:23	07:52		
	20:47			19:54	18:48			16:47			16:04	16:02		
27	05:20			06:04	06:49			06:35			07:25	07:52		
	20:46			19:52	18:46			16:45			16:03	16:02		
28	05:21			06:05	06:50			06:37			07:26	07:53		
	20:44			19:50	18:44			16:43			16:02	16:03		
29	05:22			06:06	06:52			06:39			07:27	07:53		
	20:43			19:48	18:42			16:41			16:02	16:04		
30	05:24			06:08	06:53			06:40			07:29	07:53		
	20:42			19:46	18:39			16:40			16:01	16:05		
31	05:25			06:09				06:42				07:53		
	20:40			19:44				16:38				16:06		
Potential sun hours	490			447		379		335			275		256	
Total, worst case		224				281		264						
Sun reduction		0,53				0,44		0,41						
Oper. time red.		1,00				1,00		1,00						
Wind dir. red.		1,00				1,00		1,00						
Total reduction		0,53				0,44		0,41						
Total, real		120				124		109						

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: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: K - RB11
Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June	July	August	September	October	November	December		
1	07:53 16:07	07:30 16:51	06:41 17:38	06:36 19:27	05:36 20:12	04:55 20:54	20:12 (1) 20:24 (1)	04:53 21:07	20:15 (1) 20:36 (1)	05:26 20:39	06:11 19:42	06:55 18:37	06:43 16:36	07:30 16:00
2	07:53 16:08	07:29 16:53	06:39 17:39	06:34 19:28	05:34 20:14	04:55 20:55	20:11 (1) 20:24 (1)	04:54 21:07	20:16 (1) 20:35 (1)	05:28 20:37	06:12 19:40	06:56 18:35	06:45 16:35	07:31 16:00
3	07:53 16:09	07:27 16:54	06:37 17:41	06:32 19:30	05:33 20:15	04:54 20:56	20:11 (1) 20:26 (1)	04:55 21:06	20:16 (1) 20:35 (1)	05:29 20:36	06:14 19:38	06:58 18:33	06:47 16:33	07:33 15:59
4	07:53 16:10	07:26 16:56	06:35 17:43	06:29 19:31	05:31 20:17	04:53 20:57	20:11 (1) 20:26 (1)	04:55 21:06	20:16 (1) 20:35 (1)	05:30 20:34	06:15 19:36	06:59 18:31	06:48 16:31	07:34 15:59
5	07:53 16:11	07:24 16:58	06:33 17:44	06:27 19:33	05:29 20:18	04:53 20:58	20:11 (1) 20:27 (1)	04:56 21:05	20:16 (1) 20:34 (1)	05:32 20:33	06:17 19:33	07:01 18:29	06:50 16:30	07:35 15:58
6	07:52 16:12	07:23 16:59	06:31 17:46	06:25 19:34	05:28 20:20	04:52 20:58	20:11 (1) 20:28 (1)	04:57 21:05	20:17 (1) 20:34 (1)	05:33 20:31	06:18 19:31	07:02 18:27	06:52 16:28	07:36 15:58
7	07:52 16:13	07:21 17:01	06:29 17:48	06:23 19:36	05:26 20:21	04:52 20:59	20:11 (1) 20:29 (1)	04:58 21:05	20:17 (1) 20:34 (1)	05:35 20:29	06:20 19:29	07:04 18:25	06:53 16:27	07:37 15:58
8	07:52 16:15	07:20 17:03	06:27 17:49	06:21 19:37	05:24 20:23	04:51 21:00	20:10 (1) 20:29 (1)	04:59 21:04	20:18 (1) 20:34 (1)	05:36 20:28	06:21 19:27	07:05 18:22	06:55 16:25	07:39 15:57
9	07:51 16:16	07:18 17:04	06:25 17:51	06:19 19:39	05:23 20:24	04:51 21:01	20:11 (1) 20:30 (1)	04:59 21:03	20:19 (1) 20:33 (1)	05:37 20:26	06:23 19:25	07:07 18:20	06:57 16:24	07:40 15:57
10	07:51 16:17	07:16 17:06	06:23 17:52	06:17 19:40	05:21 20:26	04:51 21:02	20:11 (1) 20:31 (1)	05:00 21:03	20:18 (1) 20:32 (1)	05:39 20:24	06:24 19:23	07:09 18:18	06:58 16:22	07:41 15:57
11	07:50 16:19	07:15 17:08	06:21 17:54	06:15 19:42	05:20 20:27	04:50 21:02	20:11 (1) 20:32 (1)	05:01 21:02	20:19 (1) 20:31 (1)	05:40 20:22	06:25 19:21	07:10 18:16	07:00 16:21	07:42 15:57
12	07:50 16:20	07:13 17:10	06:19 17:56	06:13 19:44	05:18 20:29	04:50 21:03	20:11 (1) 20:32 (1)	05:02 21:01	20:20 (1) 20:31 (1)	05:42 20:21	06:27 19:18	07:12 18:14	07:01 16:19	07:43 15:57
13	07:49 16:21	07:11 17:11	06:16 17:57	06:11 19:45	05:17 20:30	04:50 21:03	20:11 (1) 20:32 (1)	05:03 21:01	20:21 (1) 20:30 (1)	05:43 20:19	06:28 19:16	07:13 18:12	07:03 16:18	07:44 15:57
14	07:49 16:23	07:10 17:13	06:14 17:59	06:09 19:47	05:15 20:31	04:50 21:04	20:11 (1) 20:33 (1)	05:04 21:00	20:22 (1) 20:30 (1)	05:45 20:17	06:30 19:14	07:15 18:10	07:05 16:17	07:45 15:57
15	07:48 16:24	07:08 17:15	06:12 18:00	06:07 19:48	05:14 20:33	04:49 21:05	20:11 (1) 20:33 (1)	05:05 20:59	20:23 (1) 20:29 (1)	05:46 20:15	06:31 19:12	07:16 18:08	07:06 16:15	07:45 15:57
16	07:47 16:26	07:06 17:16	06:10 18:02	06:05 19:50	05:13 20:34	04:49 21:05	20:12 (1) 20:34 (1)	05:06 20:58	20:24 (1) 20:28 (1)	05:48 20:13	06:33 19:10	07:18 18:06	07:08 16:14	07:46 15:57
17	07:46 16:27	07:04 17:18	06:08 18:03	06:03 19:51	05:11 20:36	04:49 21:05	20:12 (1) 20:34 (1)	05:07 20:57	20:25 (1) 20:12	05:49 20:08	06:34 19:08	07:19 18:04	07:09 16:13	07:47 15:57
18	07:46 16:28	07:02 17:20	06:06 18:05	06:01 19:53	05:10 20:37	04:49 21:06	20:12 (1) 20:35 (1)	05:09 20:56	05:50 20:10	06:36 19:05	06:37 18:02	07:21 18:02	07:11 16:12	07:48 15:58
19	07:45 16:30	07:01 17:21	06:04 18:07	05:59 19:54	05:09 20:38	04:49 21:06	20:12 (1) 20:35 (1)	05:10 20:55	05:52 20:08	06:37 19:03	06:37 18:00	07:23 18:00	07:13 16:11	07:48 15:58
20	07:44 16:32	06:59 17:23	06:02 18:08	05:57 19:56	05:07 20:40	04:49 21:07	20:12 (1) 20:35 (1)	05:11 20:54	05:53 20:06	06:39 19:01	06:39 17:58	07:24 18:04	07:14 16:10	07:49 15:58
21	07:43 16:33	06:57 17:25	05:59 18:10	05:55 19:57	05:06 20:41	04:50 21:07	20:13 (1) 20:36 (1)	05:12 20:53	05:55 20:04	06:40 18:59	06:40 17:56	07:26 18:04	07:16 16:08	07:50 15:59
22	07:42 16:35	06:55 17:26	05:57 18:11	05:53 19:59	05:05 20:42	04:50 21:07	20:13 (1) 20:36 (1)	05:13 20:52	05:56 20:02	06:42 18:57	06:42 17:54	07:27 18:04	07:17 16:07	07:50 15:59
23	07:41 16:36	06:53 17:28	05:55 18:13	05:51 20:00	05:04 20:43	04:50 21:07	20:13 (1) 20:36 (1)	05:15 20:51	05:58 20:00	06:43 18:55	06:43 17:52	07:29 18:04	07:19 16:06	07:51 16:00
24	07:40 16:38	06:51 17:30	05:53 18:14	05:49 20:02	05:03 20:45	04:50 21:07	20:13 (1) 20:36 (1)	05:16 20:50	05:59 19:58	06:44 18:52	06:44 17:51	07:31 18:06	07:20 16:06	07:51 16:00
25	07:39 16:39	06:49 17:31	05:51 18:16	05:47 20:03	05:02 20:46	04:51 21:07	20:14 (1) 20:36 (1)	05:17 20:48	06:01 19:56	06:46 18:50	06:46 17:49	07:22 18:05	07:22 16:05	07:52 16:01
26	07:38 16:41	06:47 17:33	05:49 18:17	05:45 20:05	05:01 20:47	04:51 21:07	20:14 (1) 20:36 (1)	05:18 20:47	06:02 19:54	06:47 18:48	06:47 17:47	07:23 18:04	07:23 16:04	07:52 16:02
27	07:36 16:43	06:45 17:35	05:47 18:19	05:43 20:06	05:00 20:48	20:17 (1) 20:19 (1)	04:51 20:37 (1)	05:20 20:46	06:04 19:52	06:49 18:46	06:49 17:45	07:24 18:03	07:24 16:03	07:52 16:02
28	07:35 16:44	06:43 17:36	05:44 18:20	05:41 20:08	04:59 20:49	20:15 (1) 20:20 (1)	04:52 20:14 (1)	05:21 20:44	06:05 19:50	06:50 18:44	06:37 17:43	07:26 18:02	07:26 16:02	07:52 16:03
29	07:34 16:46		06:42 19:22	05:40 20:09	04:58 20:50	20:14 (1) 20:21 (1)	04:52 20:13 (1)	05:22 20:43	06:06 19:48	06:52 18:42	06:39 17:41	07:27 18:02	07:27 16:02	07:53 16:04
30	07:33 16:48		06:40 19:24	05:38 20:11	04:57 20:52	20:13 (1) 20:21 (1)	04:53 20:13 (1)	05:24 20:42	06:08 19:46	06:53 18:39	06:40 17:40	07:29 18:01	07:29 16:01	07:53 16:05
31	07:31 16:49		06:38 19:25		04:56 20:53	20:13 (1) 20:23 (1)	20:13 (1) 20:23 (1)	05:25 20:40	06:09 19:44		06:42 16:38		07:53 16:06	
Potential sun hours	269	283	368	411	475	486	490		447	379	335	275	256	
Total, worst case					32	608		225						
Sun reduction					0,51	0,46		0,53						
Oper. time red.					1,00	1,00		1,00						
Wind dir. red.					1,00	1,00		1,00						
Total reduction					0,51	0,46		0,53						
Total, real					16	280		120						

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: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: L - RB12

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:53 16:07	07:30 16:51	06:41 17:38	06:36 19:27	05:36 20:12	04:55 20:54	04:53 21:07	20:24 (1) 05:26	06:11 19:42	06:55 18:37	06:43 16:36	07:30 16:00
2	07:53 16:08	07:29 16:53	06:39 17:39	06:34 19:28	05:34 20:14	04:55 20:55	04:54 21:07	20:24 (1) 05:28	06:12 19:40	06:56 18:35	06:45 16:35	07:31 16:00
3	07:53 16:09	07:27 16:54	06:37 17:41	06:32 19:30	05:33 20:15	04:54 20:56	04:55 21:06	20:25 (1) 05:29	06:14 19:38	06:58 18:33	06:47 16:33	07:33 15:59
4	07:53 16:10	07:26 16:56	06:35 17:43	06:29 19:31	05:31 20:17	04:53 20:57	20:23 (1) 21:06	20:26 (1) 05:30	06:15 19:36	06:59 18:31	06:48 16:31	07:34 15:59
5	07:53 16:11	07:24 16:58	06:33 17:44	06:27 19:33	05:29 20:18	04:53 20:58	20:22 (1) 21:05	20:26 (1) 05:32	06:17 19:33	07:01 18:29	06:50 16:30	07:35 15:58
6	07:52 16:12	07:23 16:59	06:31 17:46	06:25 19:34	05:28 20:20	04:52 20:58	20:21 (1) 21:05	20:27 (1) 05:33	06:18 19:31	07:02 18:27	06:52 16:28	07:36 15:58
7	07:52 16:13	07:21 17:01	06:29 17:48	06:23 19:36	05:26 20:21	04:52 20:59	20:21 (1) 21:05	20:28 (1) 05:35	06:20 19:29	07:04 18:25	06:53 16:27	07:37 15:58
8	07:52 16:15	07:20 17:03	06:27 17:49	06:21 19:37	05:24 20:23	04:51 21:00	20:20 (1) 21:04	20:30 (1) 05:36	06:21 19:27	07:05 18:22	06:55 16:25	07:39 15:57
9	07:51 16:16	07:18 17:04	06:25 17:51	06:19 19:39	05:23 20:24	04:51 21:01	20:20 (1) 21:03	20:32 (1) 05:37	06:23 19:25	07:07 18:20	06:57 16:24	07:40 15:57
10	07:51 16:17	07:16 17:06	06:23 17:52	06:17 19:40	05:21 20:26	04:51 21:02	20:20 (1) 21:03	20:33 (1) 05:39	06:24 19:23	07:09 18:18	06:58 16:22	07:41 15:57
11	07:50 16:19	07:15 17:08	06:21 17:54	06:15 19:42	05:20 20:27	04:50 21:02	20:20 (1) 21:02	20:34 (1) 05:40	06:25 19:21	07:10 18:16	07:00 16:21	07:42 15:57
12	07:50 16:20	07:13 17:10	06:19 17:56	06:13 19:44	05:18 20:29	04:50 21:03	20:19 (1) 21:01	20:32 (1) 05:43	06:27 19:18	07:12 18:14	07:01 16:19	07:43 15:57
13	07:49 16:21	07:11 17:11	06:16 17:57	06:11 19:45	05:17 20:30	04:50 21:03	20:19 (1) 21:01	20:33 (1) 05:45	06:28 19:16	07:13 18:12	07:03 16:18	07:44 15:57
14	07:49 16:23	07:10 17:13	06:14 17:59	06:09 19:47	05:15 20:31	04:50 21:04	20:19 (1) 21:00	20:34 (1) 05:46	06:30 19:14	07:15 18:10	07:05 16:17	07:45 15:57
15	07:48 16:24	07:08 17:15	06:12 18:00	06:07 19:48	05:14 20:33	04:49 21:05	20:20 (1) 21:05	20:35 (1) 05:48	06:31 19:12	07:16 18:08	07:06 16:15	07:45 15:57
16	07:47 16:26	07:06 17:16	06:10 18:02	06:05 19:50	05:13 20:34	04:49 21:05	20:20 (1) 21:05	20:36 (1) 05:50	06:33 19:10	07:18 18:06	07:08 16:14	07:46 15:57
17	07:46 16:27	07:04 17:18	06:08 18:03	06:03 19:51	05:11 20:36	04:49 21:05	20:20 (1) 21:05	20:37 (1) 05:51	06:34 19:01	07:19 17:58	07:09 16:10	07:47 15:58
18	07:46 16:28	07:02 17:20	06:06 18:05	06:01 19:53	05:10 20:37	04:49 21:06	20:20 (1) 21:06	20:38 (1) 05:52	06:36 19:05	07:21 18:02	07:11 16:12	07:48 15:58
19	07:45 16:30	07:01 17:21	06:04 18:07	05:59 19:54	05:09 20:38	04:49 21:06	20:20 (1) 21:05	20:39 (1) 05:53	06:37 19:03	07:23 18:00	07:13 16:11	07:48 15:58
20	07:44 16:32	06:59 17:23	06:02 18:08	05:57 19:56	05:07 20:40	04:49 21:07	20:20 (1) 21:07	20:40 (1) 05:54	06:39 19:01	07:24 17:58	07:14 16:10	07:49 15:58
21	07:43 16:33	06:57 17:25	05:59 18:10	05:55 19:57	05:06 20:41	04:50 21:07	20:21 (1) 21:07	20:41 (1) 05:55	06:40 18:59	07:26 17:56	07:16 16:08	07:50 15:59
22	07:42 16:35	06:55 17:26	05:57 18:11	05:53 19:59	05:05 20:42	04:50 21:07	20:21 (1) 21:07	20:42 (1) 05:56	06:42 18:57	07:27 17:54	07:17 16:07	07:50 15:59
23	07:41 16:36	06:53 17:28	05:55 18:13	05:51 20:00	05:04 20:43	04:50 21:07	20:21 (1) 21:07	20:43 (1) 05:58	06:43 18:55	07:29 17:52	07:19 16:06	07:51 16:00
24	07:40 16:38	06:51 17:30	05:53 18:14	05:49 20:02	05:03 20:45	04:50 21:07	20:21 (1) 21:07	20:44 (1) 05:59	06:44 18:52	07:31 17:51	07:20 16:06	07:51 16:00
25	07:39 16:39	06:49 17:31	05:51 18:16	05:47 20:03	05:02 20:46	04:51 21:07	20:22 (1) 21:07	20:45 (1) 06:01	06:46 18:50	07:32 17:50	07:22 16:05	07:52 16:01
26	07:38 16:41	06:47 17:33	05:49 18:17	05:45 20:05	05:01 20:47	04:51 21:07	20:22 (1) 21:07	20:46 (1) 06:02	06:47 18:48	07:33 17:47	07:23 16:04	07:52 16:02
27	07:36 16:43	06:45 17:35	05:47 18:19	05:43 20:06	05:00 20:48	04:51 21:07	20:23 (1) 21:07	20:47 (1) 06:04	06:49 18:46	07:34 17:46	07:24 16:03	07:52 16:02
28	07:35 16:44	06:43 17:36	05:44 18:20	05:42 20:08	04:59 20:49	04:52 21:07	20:23 (1) 21:07	20:48 (1) 06:05	06:50 18:44	07:35 17:43	07:26 16:02	07:52 16:03
29	07:34 16:46		06:42 19:22	05:40 20:09	04:58 20:50	04:52 21:07	20:23 (1) 21:07	20:49 (1) 06:07	06:52 18:42	07:36 17:41	07:27 16:02	07:53 16:04
30	07:33 16:48		06:40 19:24	05:38 20:11	04:57 20:52	04:53 21:07	20:23 (1) 21:07	20:50 (1) 06:08	06:53 18:39	07:37 17:40	07:29 16:01	07:53 16:05
31	07:31 16:49		06:38 19:25		04:56 20:53		20:25 20:40	20:51 (1) 19:44	06:09 19:44	06:42 18:38	07:53 16:06	
Potential sun hours	269	283	368	411	475	486	490	447	379	335	275	256
Total, worst case						334		68				
Sun reduction						0,46		0,53				
Oper. time red.						1,00		1,00				
Wind dir. red.						1,00		1,00				
Total reduction						0,46		0,53				
Total, real						154		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: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: M - RB13
Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:53 16:07	07:30 16:51	06:41 17:38	06:36 19:27	05:36 20:12	04:55 20:54	04:53 21:07	05:26 20:39	06:11 19:42	06:55 18:37	06:43 16:36	07:30 16:00
2	07:53 16:08	07:29 16:53	06:39 17:39	06:34 19:28	05:34 20:14	04:55 20:55	04:54 21:07	05:28 20:37	06:12 19:40	06:56 18:35	06:45 16:35	07:31 16:00
3	07:53 16:09	07:27 16:54	06:37 17:41	06:32 19:30	05:33 20:15	04:54 20:56	04:55 21:06	05:29 20:36	06:14 19:38	06:58 18:33	06:47 16:33	07:33 15:59
4	07:53 16:10	07:26 16:56	06:35 17:43	06:29 19:31	05:31 20:17	04:53 20:57	04:55 21:06	05:30 20:34	06:15 19:36	06:59 18:31	06:48 16:31	07:34 15:59
5	07:53 16:11	07:24 16:58	06:33 17:44	06:27 19:33	05:29 20:18	04:53 20:58	04:56 21:05	05:32 20:33	06:17 19:33	07:01 18:29	06:50 16:30	07:35 15:58
6	07:52 16:12	07:23 16:59	06:31 17:46	06:25 19:34	05:28 20:20	04:52 20:58	04:57 21:05	05:33 20:31	06:18 19:31	07:02 18:27	06:52 16:28	07:36 15:58
7	07:52 16:13	07:21 17:01	06:29 17:48	06:23 19:36	05:26 20:21	04:52 20:59	04:58 21:05	05:35 20:29	06:20 19:29	07:04 18:25	06:53 16:27	07:37 15:58
8	07:52 16:15	07:20 17:03	06:27 17:49	06:21 19:37	05:24 20:23	04:51 21:00	04:59 21:04	05:36 20:28	06:21 19:27	07:05 18:22	06:55 16:25	07:39 15:57
9	07:51 16:16	07:18 17:04	06:25 17:51	06:19 19:39	05:23 20:24	04:51 21:01	04:59 21:03	05:37 20:26	06:23 19:25	07:07 18:20	06:57 16:24	07:40 15:57
10	07:51 16:17	07:16 17:06	06:23 17:52	06:17 19:40	05:21 20:26	04:51 21:02	05:00 21:03	05:39 20:24	06:24 19:23	07:09 18:18	06:58 16:22	07:41 15:57
11	07:50 16:19	07:15 17:08	06:21 17:54	06:15 19:42	05:20 20:27	04:50 21:02	05:01 21:02	05:40 20:22	06:25 19:21	07:10 18:16	07:00 16:21	07:42 15:57
12	07:50 16:20	07:13 17:10	06:19 17:56	06:13 19:44	05:18 20:29	04:50 21:03	05:02 21:01	05:42 20:21	06:27 19:18	07:12 18:14	07:01 16:19	07:43 15:57
13	07:49 16:21	07:11 17:11	06:16 17:57	06:11 19:45	05:17 20:30	04:50 21:03	05:03 21:01	05:43 20:19	06:28 19:16	07:13 18:12	07:03 16:18	07:44 15:57
14	07:49 16:23	07:10 17:13	06:14 17:59	06:09 19:47	05:15 20:31	04:50 21:04	05:04 21:00	05:45 20:17	06:30 19:14	07:15 18:10	07:05 16:17	07:45 15:57
15	07:48 16:24	07:08 17:15	06:12 18:00	06:07 19:48	05:14 20:33	04:49 21:05	05:05 20:59	05:46 20:15	06:31 19:12	07:16 18:08	07:06 16:15	07:45 15:57
16	07:47 16:26	07:06 17:16	06:10 18:02	06:05 19:50	05:13 20:34	04:49 21:05	05:06 20:58	05:48 20:13	06:33 19:10	07:18 18:06	07:08 16:14	07:46 15:57
17	07:46 16:27	07:04 17:18	06:08 18:03	06:03 19:51	05:11 20:36	04:49 21:05	05:07 20:57	05:49 20:12	06:34 19:08	07:19 18:04	07:09 16:13	07:47 15:57
18	07:46 16:28	07:02 17:20	06:06 18:05	06:01 19:53	05:10 20:37	04:49 21:06	05:09 20:56	05:50 20:10	06:36 19:05	07:21 18:02	07:11 16:12	07:48 15:58
19	07:45 16:30	07:01 17:21	06:04 18:07	05:59 19:54	05:09 20:38	04:49 21:06	05:10 20:55	05:52 20:08	06:37 19:03	07:23 18:00	07:13 16:11	07:48 15:58
20	07:44 16:32	06:59 17:23	06:02 18:08	05:57 19:56	05:07 20:40	04:49 21:07	05:11 20:54	05:53 20:06	06:39 19:01	07:24 17:58	07:14 16:10	07:49 15:58
21	07:43 16:33	06:57 17:25	05:59 18:10	05:55 19:57	05:06 20:41	04:50 21:07	05:12 20:53	05:55 20:04	06:40 18:59	07:26 17:56	07:16 16:08	07:50 15:59
22	07:42 16:35	06:55 17:26	05:57 18:11	05:53 19:59	05:05 20:42	04:50 21:07	05:13 20:52	05:56 20:02	06:42 18:57	07:27 17:54	07:17 16:07	07:50 15:59
23	07:41 16:36	06:53 17:28	05:55 18:13	05:51 20:00	05:04 20:43	04:50 21:07	05:15 20:51	05:58 20:00	06:43 18:55	07:29 17:52	07:19 16:06	07:51 16:00
24	07:40 16:38	06:51 17:30	05:53 18:14	05:49 20:02	05:03 20:45	04:50 21:07	05:16 20:50	05:59 19:58	06:44 18:52	07:31 17:51	07:20 16:06	07:51 16:00
25	07:39 16:39	06:49 17:31	05:51 18:16	05:47 20:03	05:02 20:46	04:51 21:07	05:17 20:48	06:01 19:56	06:46 18:50	07:26 17:49	07:16 16:05	07:52 16:01
26	07:38 16:41	06:47 17:33	05:49 18:17	05:45 20:05	05:01 20:47	04:51 21:07	05:18 20:47	06:02 19:54	06:47 18:48	07:23 17:47	07:13 16:04	07:52 16:02
27	07:36 16:43	06:45 17:35	05:47 18:19	05:43 20:06	05:00 20:48	04:51 21:07	05:20 20:46	06:04 19:52	06:49 18:46	07:24 17:45	07:14 16:03	07:52 16:02
28	07:35 16:44	06:43 17:36	05:44 18:20	05:42 20:08	04:59 20:49	04:52 21:07	05:21 20:44	06:05 19:50	06:50 18:44	07:25 17:43	07:15 16:02	07:53 16:03
29	07:34 16:46		06:42 19:22	05:40 20:09	04:58 20:50	04:52 21:07	05:22 20:43	06:07 19:48	06:52 18:42	07:27 17:41	07:16 16:02	07:53 16:04
30	07:33 16:48		06:40 19:24	05:38 20:11	04:57 20:52	04:53 21:07	05:24 20:42	06:08 19:46	06:53 18:39	07:29 17:40	07:29 16:01	07:53 16:05
31	07:31 16:49		06:38 19:25		04:56 20:53		05:25 20:40	06:09 19:44		06:42 17:38		07:53 16:06
Potential sun hours	269	283	368	411	475	486	490	447	379	335	275	256
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: N - RB14
Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June	July	August	September	October	November	December		
1	07:53 16:07	07:30 16:51	06:41 17:38	06:36 19:27	05:36 20:13	04:56 20:54	05:31 (1) 05:50 (1)	04:54 21:07	05:42 (1) 05:50 (1)	05:26 20:39	06:11 19:42	06:55 18:37	06:44 16:36	07:30 16:00
2	07:53 16:08	07:29 16:53	06:39 17:40	06:34 19:28	05:35 20:14	04:55 20:55	05:31 (1) 05:49 (1)	04:54 21:07	05:41 (1) 05:51 (1)	05:28 20:37	06:12 19:40	06:57 18:35	06:45 16:35	07:31 16:00
3	07:53 16:09	07:27 16:54	06:37 17:41	06:32 19:30	05:33 20:16	04:54 20:56	05:32 (1) 05:50 (1)	04:55 21:06	05:41 (1) 05:52 (1)	05:29 20:36	06:14 19:38	06:58 18:33	06:47 16:33	07:33 15:59
4	07:53 16:10	07:26 16:56	06:35 17:43	06:30 19:31	05:31 20:17	04:54 20:57	05:32 (1) 05:49 (1)	04:56 21:06	05:41 (1) 05:53 (1)	05:31 20:34	06:15 19:36	07:00 18:31	06:49 16:31	07:34 15:59
5	07:53 16:11	07:24 16:58	06:33 17:44	06:28 19:33	05:29 20:19	04:53 20:58	05:33 (1) 05:49 (1)	04:56 21:06	05:50 (1) 05:53 (1)	05:32 20:33	06:17 19:34	07:01 18:29	06:50 16:30	07:35 15:59
6	07:52 16:12	07:23 16:59	06:31 17:46	06:25 19:34	05:28 20:20	04:52 20:59	05:33 (1) 05:48 (1)	04:57 21:05	05:40 (1) 05:54 (1)	05:33 20:31	06:18 19:31	07:03 18:27	06:52 16:28	07:36 15:58
7	07:52 16:14	07:21 17:01	06:29 17:48	06:23 19:36	05:26 20:22	04:52 20:59	05:34 (1) 05:48 (1)	04:58 21:05	05:40 (1) 05:55 (1)	05:35 20:29	06:20 19:29	07:04 18:25	06:53 16:27	07:38 15:58
8	07:52 16:15	07:20 17:03	06:27 17:49	06:21 19:38	05:25 20:23	04:51 21:00	05:36 (1) 05:48 (1)	04:59 21:04	05:40 (1) 05:56 (1)	05:36 20:28	06:21 19:27	07:06 18:23	06:55 16:25	07:39 15:58
9	07:51 16:16	07:18 17:05	06:25 17:51	06:19 19:39	05:23 20:24	04:51 21:01	05:36 (1) 05:47 (1)	05:00 21:04	05:39 (1) 05:57 (1)	05:38 20:26	06:23 19:25	07:07 18:21	06:57 16:24	07:40 15:57
10	07:51 16:17	07:16 17:06	06:23 17:53	06:17 19:41	05:21 20:26	04:51 21:02	05:37 (1) 05:47 (1)	05:00 21:03	05:39 (1) 05:57 (1)	05:39 20:24	06:24 19:23	07:09 18:18	06:58 16:22	07:41 15:57
11	07:51 16:19	07:15 17:08	06:21 17:54	06:15 19:42	05:20 20:27	04:50 21:02	05:38 (1) 05:47 (1)	05:01 21:02	05:38 (1) 05:57 (1)	05:40 20:23	06:26 19:21	07:10 18:16	07:00 16:21	07:42 15:57
12	07:50 16:20	07:13 17:10	06:19 17:56	06:13 19:44	05:18 20:29	04:50 21:03	05:39 (1) 05:46 (1)	05:02 21:02	05:38 (1) 05:58 (1)	05:42 20:21	06:27 19:19	07:12 18:14	07:02 16:19	07:43 15:57
13	07:49 16:21	07:11 17:11	06:17 17:57	06:11 19:45	05:17 20:30	04:50 21:04	05:39 (1) 05:45 (1)	05:03 21:01	05:38 (1) 05:58 (1)	05:43 20:19	06:29 19:16	07:13 18:12	07:03 16:18	07:44 15:57
14	07:49 16:23	07:10 17:13	06:15 17:59	06:09 19:47	05:15 20:32	04:50 21:04	05:40 (1) 05:47 (1)	04:50 21:04	05:41 (1) 05:59 (1)	05:04 20:17	06:30 19:14	07:15 18:10	07:05 16:17	07:45 15:57
15	07:48 16:24	07:08 17:15	06:12 18:00	06:07 19:48	05:14 20:33	04:50 21:05	05:38 (1) 05:47 (1)	04:50 21:05	05:05 20:59	05:46 20:15	06:31 19:12	07:16 18:08	07:06 16:16	07:46 15:57
16	07:47 16:26	07:06 17:16	06:10 18:02	06:05 19:50	05:13 20:34	04:49 21:05	05:37 (1) 05:48 (1)	04:49 21:05	05:06 20:58	05:48 20:14	06:33 19:10	07:18 18:06	07:08 16:14	07:46 15:57
17	07:47 16:27	07:04 17:18	06:08 18:04	06:03 19:51	05:11 20:36	04:49 21:06	05:36 (1) 05:49 (1)	04:49 21:06	05:08 20:57	05:49 20:12	06:34 19:08	07:20 18:04	07:10 16:13	07:47 15:58
18	07:46 16:29	07:03 17:20	06:06 18:05	06:01 19:53	05:10 20:37	04:49 21:06	05:35 (1) 05:50 (1)	04:49 21:06	05:09 20:56	05:51 20:10	06:36 19:06	07:21 18:02	07:11 16:12	07:48 15:58
19	07:45 16:30	07:01 17:21	06:04 18:07	05:59 19:54	05:09 20:38	04:49 21:06	05:34 (1) 05:50 (1)	04:49 21:06	05:10 20:55	05:52 20:08	06:37 19:03	07:23 18:00	07:13 16:11	07:49 15:58
20	07:44 16:32	06:59 17:23	06:02 18:08	05:57 19:56	05:07 20:40	04:50 21:07	05:32 (1) 05:50 (1)	04:50 21:07	05:11 20:54	05:54 20:06	06:39 19:01	07:24 17:58	07:14 16:10	07:49 15:59
21	07:43 16:33	06:57 17:25	06:00 18:10	05:55 19:57	05:06 20:41	04:50 21:07	05:31 (1) 05:50 (1)	04:50 21:07	05:12 20:53	05:55 20:04	06:40 18:59	07:26 17:56	07:16 16:09	07:50 15:59
22	07:42 16:35	06:55 17:26	05:57 18:11	05:53 19:59	05:05 20:42	04:50 21:07	05:30 (1) 05:50 (1)	04:50 21:07	05:13 20:52	05:56 20:02	06:42 18:57	07:27 17:54	07:17 16:08	07:50 15:59
23	07:41 16:36	06:53 17:28	05:55 18:13	05:51 20:00	05:04 20:44	04:50 21:07	05:29 (1) 05:50 (1)	04:50 21:07	05:15 20:51	05:58 20:00	06:43 18:55	07:29 17:53	07:19 16:07	07:51 16:00
24	07:40 16:38	06:51 17:30	05:53 18:14	05:49 20:02	05:03 20:45	04:50 21:07	05:28 (1) 05:50 (1)	04:50 21:07	05:16 20:50	05:59 19:58	06:45 18:53	07:31 17:51	07:20 16:06	07:51 16:01
25	07:39 16:40	06:49 17:31	05:51 18:16	05:47 20:04	05:02 20:46	04:51 21:07	05:28 (1) 05:50 (1)	04:51 21:07	05:17 20:48	06:01 19:56	06:46 18:50	06:32 16:49	07:22 16:05	07:52 16:01
26	07:38 16:41	06:47 17:33	05:49 18:18	05:45 20:05	05:01 20:47	04:51 21:08	05:29 (1) 05:51 (1)	04:51 21:08	05:18 20:47	05:46 19:54	06:48 18:48	06:34 16:47	07:23 16:04	07:52 16:02
27	07:37 16:43	06:45 17:35	05:47 18:19	05:43 20:07	05:00 20:48	04:52 21:07	05:29 (1) 05:51 (1)	04:52 21:07	05:20 20:46	06:04 19:52	06:49 18:46	06:35 16:45	07:25 16:03	07:52 16:03
28	07:35 16:44	06:43 17:36	05:45 18:21	05:42 20:08	04:59 20:50	04:52 21:07	05:29 (1) 05:51 (1)	04:52 21:07	05:21 20:45	06:05 19:50	06:51 18:44	06:37 16:43	07:26 16:02	07:53 16:03
29	07:34 16:46		06:42 19:22	05:40 20:10	04:58 20:51	04:52 21:07	05:29 (1) 05:50 (1)	04:52 21:07	05:44 (1) 05:48 (1)	06:07 19:48	06:52 18:42	06:39 16:42	07:27 16:02	07:53 16:04
30	07:33 16:48		06:40 19:24	05:38 20:11	04:57 20:52	04:53 21:07	05:29 (1) 05:50 (1)	04:53 21:07	05:43 (1) 05:49 (1)	06:08 19:46	06:54 18:40	06:40 16:40	07:29 16:01	07:53 16:05
31	07:31 16:49		06:38 19:25		04:56 20:53		05:31 (1) 05:51 (1)		05:25 20:40	06:10 19:44		06:42 16:38		07:53 16:06
Potential sun hours	269	283	368	411	475	486		490		447	379	335	275	256
Total, worst case					326	186		494						
Sun reduction					0,51	0,46		0,53						
Oper. time red.					1,00	1,00		1,00						
Wind dir. red.					1,00	1,00		1,00						
Total reduction					0,51	0,46		0,53						
Total, real					166	86		264						

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: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: O - RB15
Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:53 16:07	07:30 16:51	06:41 17:38	06:36 19:27	05:36 20:13	04:56 20:54	04:54 21:07	05:26 20:39	06:11 19:42	06:55 18:37	06:44 16:36	07:30 16:00
2	07:53 16:08	07:29 16:53	06:39 17:40	06:34 19:28	05:35 20:14	04:55 20:55	04:54 21:07	05:28 20:37	06:12 19:40	06:57 18:35	06:45 16:35	07:32 16:00
3	07:53 16:09	07:27 16:54	06:37 17:41	06:32 19:30	05:33 20:16	04:54 20:56	04:55 21:06	05:29 20:36	06:14 19:38	06:58 18:33	06:47 16:33	07:33 15:59
4	07:53 16:10	07:26 16:56	06:35 17:43	06:30 19:31	05:31 20:17	04:54 20:57	04:56 21:06	05:31 20:34	06:15 19:36	07:00 18:31	06:49 16:31	07:34 15:59
5	07:53 16:11	07:24 16:58	06:33 17:44	06:28 19:33	05:29 20:19	04:53 20:58	04:56 21:06	05:32 20:33	06:17 19:34	07:01 18:29	06:50 16:30	07:35 15:59
6	07:52 16:12	07:23 17:00	06:31 17:46	06:25 19:34	05:28 20:20	04:52 20:59	04:57 21:05	05:33 20:31	06:18 19:31	07:03 18:27	06:52 16:28	07:36 15:58
7	07:52 16:14	07:21 17:01	06:29 17:48	06:23 19:36	05:26 20:22	04:52 20:59	04:58 21:05	05:35 20:29	06:20 19:29	07:04 18:25	06:53 16:27	07:38 15:58
8	07:52 16:15	07:20 17:03	06:27 17:49	06:21 19:38	05:25 20:23	04:51 21:00	04:59 21:04	05:36 20:28	06:21 19:27	07:06 18:23	06:55 16:25	07:39 15:58
9	07:51 16:16	07:18 17:05	06:25 17:51	06:19 19:39	05:23 20:24	04:51 21:01	05:00 21:04	05:38 20:26	06:23 19:25	07:07 18:21	06:57 16:24	07:40 15:57
10	07:51 16:17	07:16 17:06	06:23 17:53	06:17 19:41	05:21 20:26	04:51 21:02	05:00 21:03	05:39 20:24	06:24 19:23	07:09 18:18	06:58 16:22	07:41 15:57
11	07:51 16:19	07:15 17:08	06:21 17:54	06:15 19:42	05:20 20:27	04:50 21:02	05:01 21:02	05:41 20:23	06:26 19:21	07:10 18:16	07:00 16:21	07:42 15:57
12	07:50 16:20	07:13 17:10	06:19 17:56	06:13 19:44	05:18 20:29	04:50 21:03	05:02 21:02	05:42 20:21	06:27 19:19	07:12 18:14	07:02 16:19	07:43 15:57
13	07:49 16:21	07:11 17:11	06:17 17:57	06:11 19:45	05:17 20:30	04:50 21:04	05:03 21:01	05:43 20:19	06:29 19:16	07:13 18:12	07:03 16:18	07:44 15:57
14	07:49 16:23	07:10 17:13	06:15 17:59	06:09 19:47	05:15 20:32	04:50 21:04	05:04 21:00	05:45 20:17	06:30 19:14	07:15 18:10	07:05 16:17	07:45 15:57
15	07:48 16:24	07:08 17:15	06:12 18:00	06:07 19:48	05:14 20:33	04:50 21:05	05:05 20:59	05:46 20:15	06:31 19:12	07:16 18:08	07:06 16:16	07:46 15:57
16	07:47 16:26	07:06 17:16	06:10 18:02	06:05 19:50	05:13 20:34	04:49 21:05	05:07 20:58	05:48 20:14	06:33 19:10	07:18 18:06	07:08 16:14	07:46 15:57
17	07:47 16:27	07:04 17:18	06:08 18:04	06:03 19:51	05:11 20:36	04:49 21:06	05:08 20:57	05:49 20:12	06:34 19:08	07:20 18:04	07:10 16:13	07:47 15:58
18	07:46 16:29	07:03 17:20	06:06 18:05	06:01 19:53	05:10 20:37	04:49 21:06	05:09 20:56	05:51 20:10	06:36 19:06	07:21 18:02	07:11 16:12	07:48 15:58
19	07:45 16:30	07:01 17:21	06:04 18:07	05:59 19:54	05:09 20:38	04:49 21:06	05:10 20:55	05:52 20:08	06:37 19:03	07:23 18:00	07:13 16:11	07:49 15:58
20	07:44 16:32	06:59 17:23	06:02 18:08	05:57 19:56	05:08 20:40	04:50 21:07	05:11 20:54	05:54 20:06	06:39 19:01	07:24 17:58	07:14 16:10	07:49 15:59
21	07:43 16:33	06:57 17:25	06:00 18:10	05:55 19:57	05:06 20:41	04:50 21:07	05:12 20:53	05:55 20:04	06:40 18:59	07:26 17:56	07:16 16:09	07:50 15:59
22	07:42 16:35	06:55 17:26	05:57 18:11	05:53 19:59	05:05 20:42	04:50 21:07	05:13 20:52	05:56 20:02	06:42 18:57	07:27 17:54	07:17 16:08	07:50 15:59
23	07:41 16:36	06:53 17:28	05:55 18:13	05:51 20:00	05:04 20:44	04:50 21:07	05:15 20:51	05:58 20:00	06:43 18:55	07:29 17:53	07:19 16:07	07:51 16:00
24	07:40 16:38	06:51 17:30	05:53 18:14	05:49 20:02	05:03 20:45	04:50 21:07	05:16 20:50	05:59 19:58	06:45 18:53	07:31 17:51	07:20 16:06	07:51 16:01
25	07:39 16:40	06:49 17:31	05:51 18:16	05:47 20:04	05:02 20:46	04:51 21:08	05:17 20:48	06:01 19:56	06:46 18:50	07:32 16:49	07:22 16:05	07:52 16:01
26	07:38 16:41	06:47 17:33	05:49 18:18	05:45 20:05	05:01 20:47	04:51 21:08	05:18 20:47	06:02 19:54	06:48 18:48	07:34 16:47	07:23 16:04	07:52 16:02
27	07:37 16:43	06:45 17:35	05:47 18:19	05:43 20:07	05:00 20:48	04:52 21:08	05:20 20:46	06:04 19:52	06:49 18:46	07:35 16:45	07:25 16:03	07:52 16:03
28	07:35 16:44	06:43 17:36	05:45 18:21	05:42 20:08	04:59 20:50	04:52 21:07	05:21 20:45	06:05 19:50	06:51 18:44	07:37 16:43	07:26 16:02	07:53 16:03
29	07:34 16:46		06:42 19:22	05:40 20:10	04:58 20:51	04:52 21:07	05:22 20:43	06:07 19:48	06:52 18:42	07:39 16:42	07:27 16:02	07:53 16:04
30	07:33 16:48		06:40 19:24	05:38 20:11	04:57 20:52	04:53 21:07	05:24 20:42	06:08 19:46	06:54 18:40	07:40 16:40	07:29 16:01	07:53 16:05
31	07:31 16:49		06:38 19:25		04:56 20:53		05:25 20:40	06:10 19:44		06:42 16:38		07:53 16:06
Potential sun hours	269	283	368	411	475	486	490	447	379	335	275	256
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

Project: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar

Shadow receptor: P - RB16

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

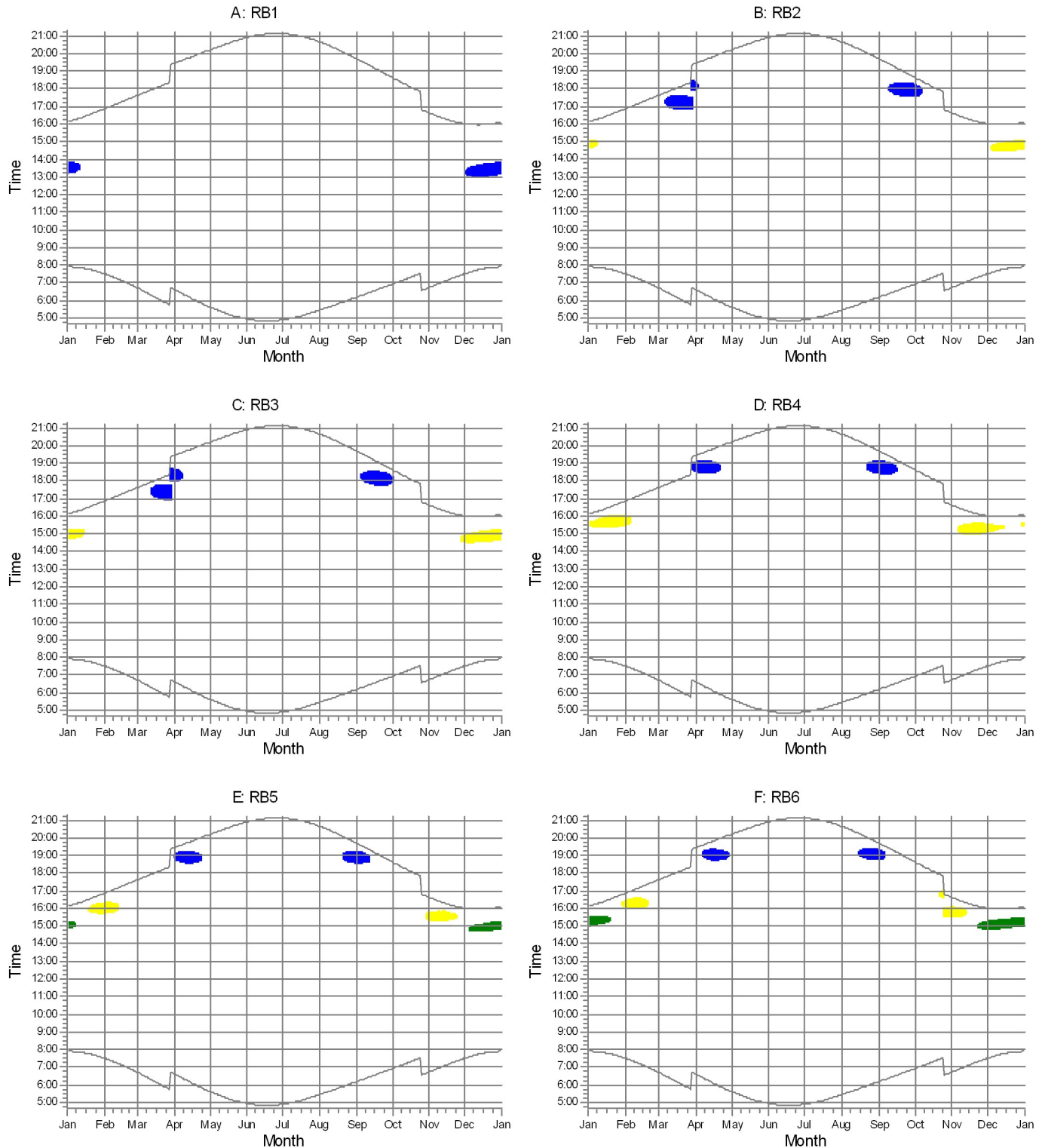
No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:53 16:07	07:30 16:51	06:41 17:38	06:36 19:27	05:36 20:13	04:56 20:54	04:54 21:07	05:26 20:39	06:11 19:42	06:55 18:37	06:44 16:36	07:30 16:00
2	07:53 16:08	07:29 16:53	06:39 17:40	06:34 19:28	05:35 20:14	04:55 20:55	04:54 21:07	05:28 20:37	06:13 19:40	06:57 18:35	06:45 16:35	07:32 16:00
3	07:53 16:09	07:27 16:54	06:37 17:41	06:32 19:30	05:33 20:16	04:54 20:56	04:55 21:06	05:29 20:36	06:14 19:38	06:58 18:33	06:47 16:33	07:33 15:59
4	07:53 16:10	07:26 16:56	06:35 17:43	06:30 19:31	05:31 20:17	04:54 20:57	04:56 21:06	05:31 20:34	06:15 19:36	07:00 18:31	06:49 16:31	07:34 15:59
5	07:53 16:11	07:24 16:58	06:33 17:45	06:28 19:33	05:29 20:19	04:53 20:58	04:56 21:06	05:32 20:33	06:17 19:34	07:01 18:29	06:50 16:30	07:35 15:59
6	07:53 16:12	07:23 17:00	06:31 17:46	06:25 19:34	05:28 20:20	04:52 20:59	04:57 21:05	05:33 20:31	06:18 19:31	07:03 18:27	06:52 16:28	07:37 15:58
7	07:52 16:14	07:21 17:01	06:29 17:48	06:23 19:36	05:26 20:22	04:52 20:59	04:58 21:05	05:35 20:29	06:20 19:29	07:04 18:25	06:53 16:27	07:38 15:58
8	07:52 16:15	07:20 17:03	06:27 17:49	06:21 19:38	05:25 20:23	04:51 21:00	04:59 21:04	05:36 20:28	06:21 19:27	07:06 18:23	06:55 16:25	07:39 15:58
9	07:52 16:16	07:18 17:05	06:25 17:51	06:19 19:39	05:23 20:25	04:51 21:01	05:00 21:04	05:38 20:26	06:23 19:25	07:07 18:21	06:57 16:24	07:40 15:57
10	07:51 16:17	07:17 17:06	06:23 17:53	06:17 19:41	05:21 20:26	04:51 21:02	05:00 21:03	05:39 20:24	06:24 19:23	07:09 18:18	06:58 16:22	07:41 15:57
11	07:51 16:19	07:15 17:08	06:21 17:54	06:15 19:42	05:20 20:27	04:50 21:02	05:01 21:02	05:41 20:23	06:26 19:21	07:10 18:16	07:00 16:21	07:42 15:57
12	07:50 16:20	07:13 17:10	06:19 17:56	06:13 19:44	05:18 20:29	04:50 21:03	05:02 21:02	05:42 20:21	06:27 19:19	07:12 18:14	07:02 16:20	07:43 15:57
13	07:50 16:21	07:11 17:11	06:17 17:57	06:11 19:45	05:17 20:30	04:50 21:04	05:03 21:01	05:43 20:19	06:29 19:16	07:13 18:12	07:03 16:18	07:44 15:57
14	07:49 16:23	07:10 17:13	06:15 17:59	06:09 19:47	05:15 20:32	04:50 21:04	05:04 21:00	05:45 20:17	06:30 19:14	07:15 18:10	07:05 16:17	07:45 15:57
15	07:48 16:24	07:08 17:15	06:12 18:00	06:07 19:48	05:14 20:33	04:50 21:05	05:05 20:59	05:46 20:16	06:31 19:12	07:16 18:08	07:06 16:16	07:46 15:57
16	07:47 16:26	07:06 17:16	06:10 18:02	06:05 19:50	05:13 20:34	04:49 21:05	05:06 20:58	05:48 20:14	06:33 19:10	07:18 18:06	07:08 16:14	07:47 15:57
17	07:47 16:27	07:04 17:18	06:08 18:04	06:03 19:51	05:11 20:36	04:49 21:06	05:08 20:57	05:49 20:12	06:34 19:08	07:20 18:04	07:10 16:13	07:47 15:58
18	07:46 16:29	07:03 17:20	06:06 18:05	06:01 19:53	05:10 20:37	04:49 21:06	05:09 20:56	05:51 20:10	06:36 19:06	07:21 18:02	07:11 16:12	07:48 15:58
19	07:45 16:30	07:01 17:21	06:04 18:07	05:59 19:54	05:09 20:38	04:49 21:06	05:10 20:55	05:52 20:08	06:37 19:03	07:23 18:00	07:13 16:11	07:49 15:58
20	07:44 16:32	06:59 17:23	06:02 18:08	05:57 19:56	05:08 20:40	04:50 21:07	05:11 20:54	05:54 20:06	06:39 19:01	07:24 17:58	07:14 16:10	07:49 15:59
21	07:43 16:33	06:57 17:25	06:00 18:10	05:55 19:57	05:06 20:41	04:50 21:07	05:12 20:53	05:55 20:04	06:40 18:59	07:26 17:56	07:16 16:09	07:50 15:59
22	07:42 16:35	06:55 17:26	05:57 18:11	05:53 19:59	05:05 20:42	04:50 21:07	05:13 20:52	05:56 20:02	06:42 18:57	07:28 17:54	07:17 16:08	07:50 15:59
23	07:41 16:36	06:53 17:28	05:55 18:13	05:51 20:01	05:04 20:44	04:50 21:07	05:15 20:51	05:58 20:00	06:43 18:55	07:29 17:53	07:19 16:07	07:51 16:00
24	07:40 16:38	06:51 17:30	05:53 18:14	05:49 20:02	05:03 20:45	04:50 21:07	05:16 20:50	05:59 19:58	06:45 18:53	07:31 17:51	07:20 16:06	07:51 16:01
25	07:39 16:40	06:49 17:31	05:51 18:16	05:47 20:04	05:02 20:46	04:51 21:08	05:17 20:49	06:01 19:56	06:46 18:50	07:32 16:49	07:22 16:05	07:52 16:01
26	07:38 16:41	06:47 17:33	05:49 18:18	05:45 20:05	05:01 20:47	04:51 21:08	05:18 20:47	06:02 19:54	06:48 18:48	07:34 16:47	07:23 16:04	07:52 16:02
27	07:37 16:43	06:45 17:35	05:47 18:19	05:43 20:07	05:00 20:48	04:52 21:08	05:20 20:46	06:04 19:52	06:49 18:46	07:35 16:45	07:25 16:03	07:52 16:03
28	07:35 16:44	06:43 17:36	05:45 18:21	05:42 20:08	04:59 20:50	04:52 21:08	05:21 20:45	06:05 19:50	06:51 18:44	07:37 16:43	07:26 16:02	07:53 16:03
29	07:34 16:46		06:42 19:22	05:40 20:10	04:58 20:51	04:52 21:07	05:22 20:43	06:07 19:48	06:52 18:42	07:39 16:42	07:28 16:02	07:53 16:04
30	07:33 16:48		06:40 19:24	05:38 20:11	04:57 20:52	04:53 21:07	05:24 20:42	06:08 19:46	06:54 18:40	07:40 16:40	07:29 16:01	07:53 16:05
31	07:32 16:49		06:38 19:25		04:56 20:53		05:25 20:40	06:10 19:44		06:42 16:38		07:53 16:06
Potential sun hours	269	283	368	411	475	486	490	447	379	335	275	256
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

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

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

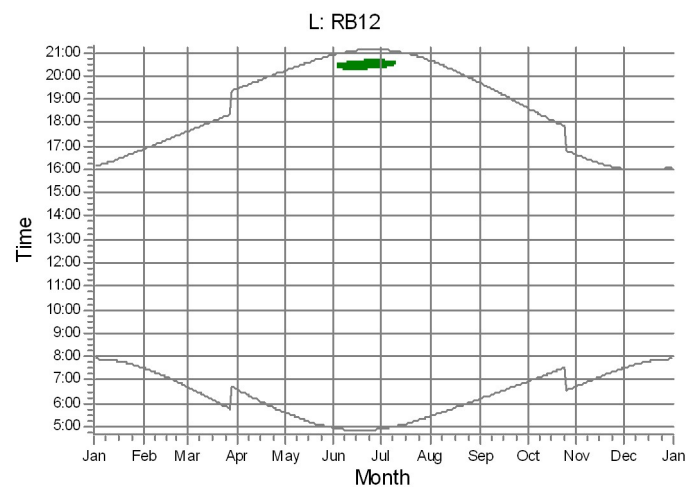
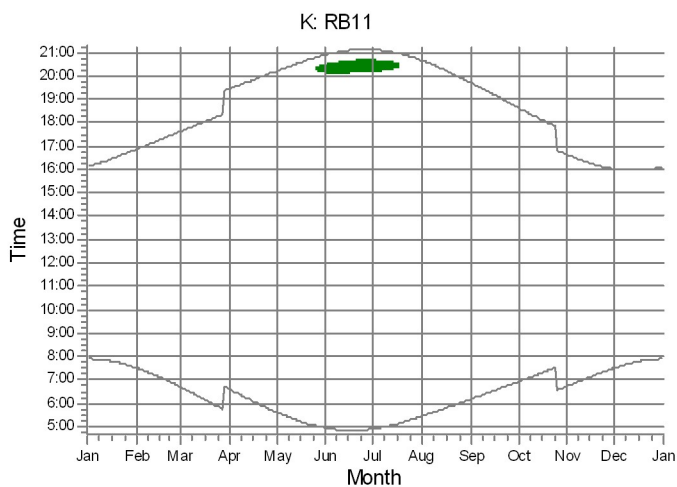
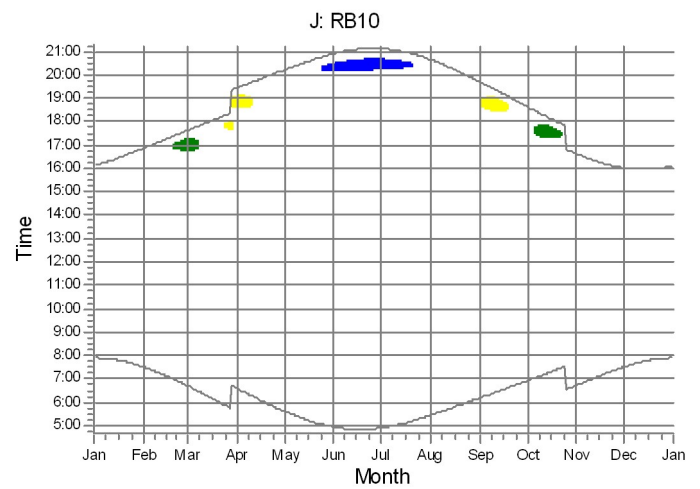
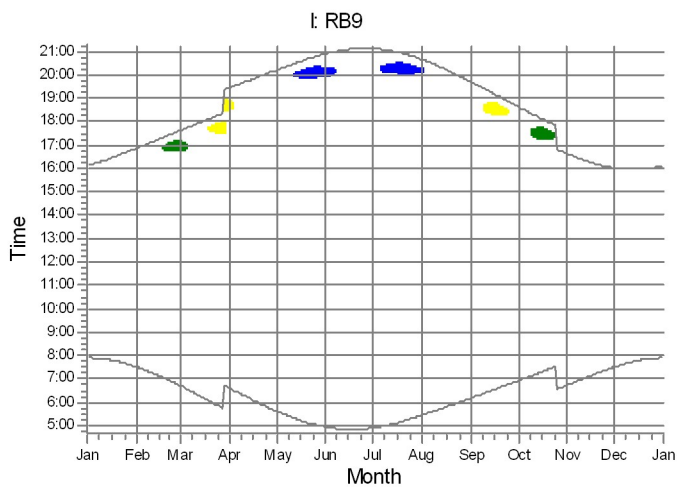
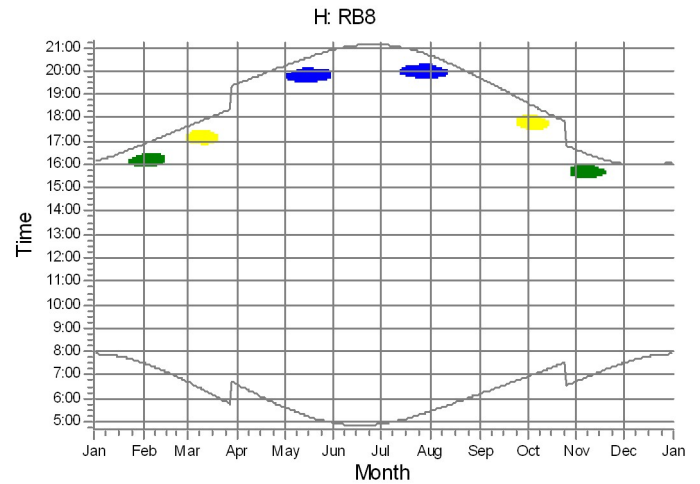
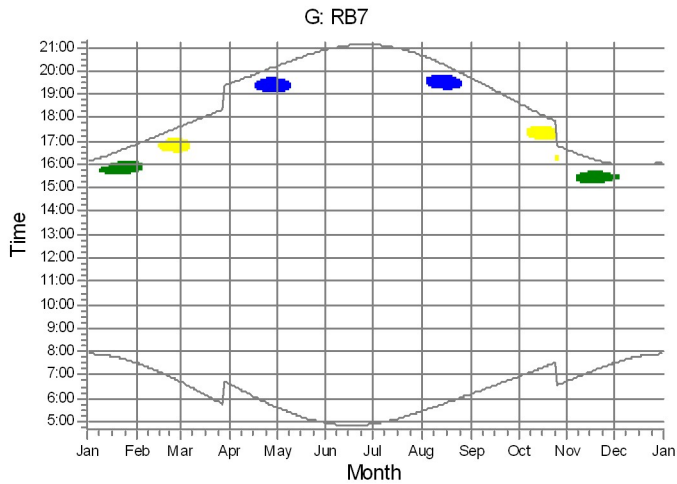
SHADOW - Calendar, graphical



WTGs

1: V1 2: V2 3: V3

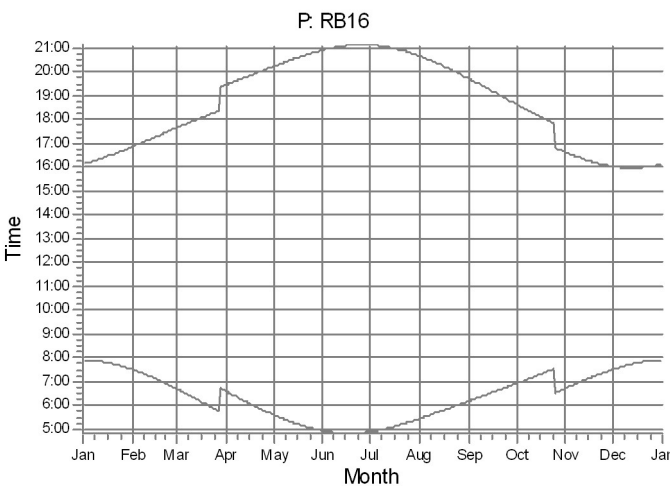
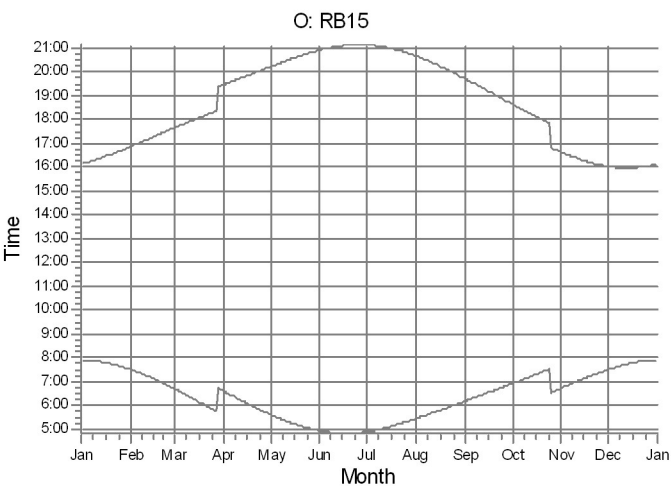
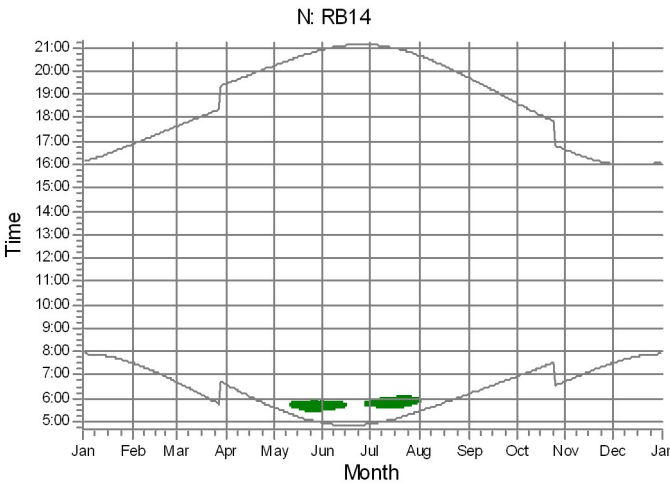
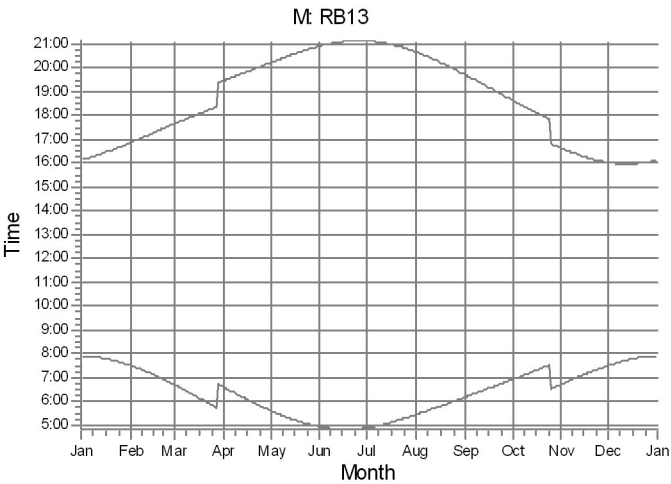
SHADOW - Calendar, graphical



WTGs

1: V1 2: V2 3: V3

SHADOW - Calendar, graphical



WTGs

1: V1

SHADOW - Calendar per WTG

WTG: 1 - V1

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January		February		March		April	May	June	
1	07:53	14:55-15:28/33	07:30	15:47-16:22/35	06:41	16:47-17:13/26	06:36	05:36	04:55	05:31-05:50/19
	16:07		16:51		17:38		19:27	20:13	20:54	20:12-20:24/12
2	07:53	14:56-15:27/31	07:29	15:49-16:25/36	06:39	16:48-17:13/25	06:34	05:34	04:55	05:31-05:49/18
	16:08		16:53		17:40		19:28	20:14	20:55	20:11-20:24/13
3	07:53	14:56-15:28/32	07:27	15:59-16:25/26	06:37	16:49-17:12/23	06:32	05:33	04:54	05:32-05:50/18
	16:09		16:54	15:51-15:58/7	17:41		19:30	20:16	20:56	20:11-20:26/15
4	07:53	14:58-15:29/31	07:26	16:00-16:26/26	06:35	16:50-17:11/21	06:30	05:31	04:53	05:32-05:49/17
	16:10		16:56		17:43		19:31	20:17	20:57	20:11-20:26/15
5	07:53	15:00-15:29/29	07:24	16:00-16:25/25	06:33	16:51-17:10/19	06:27	05:29	04:53	05:33-05:49/16
	16:11		16:58		17:44		19:33	20:19	20:58	20:11-20:27/16
6	07:52	15:01-15:29/28	07:23	16:01-16:26/25	06:31	16:52-17:09/17	06:25	05:28	04:52	05:33-05:48/15
	16:12		16:59		17:46		19:34	20:20	20:58	20:11-20:28/17
7	07:52	15:07-15:30/23	07:21	16:01-16:25/24	06:29	16:54-17:06/12	06:23	05:26	04:52	05:34-05:48/14
	16:14		17:01		17:48		19:36	20:21	20:59	20:11-20:29/18
8	07:52	15:07-15:29/22	07:20	16:01-16:24/23	06:27		06:21	05:24	04:51	05:36-05:48/12
	16:15		17:03		17:49		19:37	20:23	21:00	20:10-20:29/19
9	07:51	15:08-15:30/22	07:18	16:02-16:24/22	06:25		06:19	05:23	04:51	05:36-05:47/11
	16:16		17:04		17:51		19:39	20:24	21:01	20:11-20:30/19
10	07:51	15:44-15:46/2	07:16	16:03-16:23/20	06:23		06:17	05:21	04:51	05:37-05:47/10
	16:17	15:08-15:30/22	17:06		17:52		19:41	20:26	21:02	20:11-20:31/20
11	07:51	15:44-15:48/4	07:15	16:04-16:22/18	06:21		06:15	05:20	04:50	05:38-05:47/9
	16:19	15:10-15:30/20	17:08		17:54		19:42	20:27	21:02	20:11-20:32/21
12	07:50	15:43-15:49/6	07:13	16:06-16:20/14	06:19		06:13	05:18 05:42-05:43/1	04:50	05:39-05:46/7
	16:20	15:10-15:30/20	17:10		17:56		19:44	20:29	21:03	20:11-20:32/21
13	07:49	15:42-15:50/8	07:11	16:09-16:18/9	06:17		06:11	05:17 05:41-05:45/4	04:50	05:39-05:45/6
	16:21	15:11-15:29/18	17:11		17:57		19:45	20:30	21:04	20:11-20:32/21
14	07:49	15:41-15:51/10	07:10		06:14		06:09	05:15 05:40-05:47/7	04:50	05:41-05:44/3
	16:23	15:12-15:29/17	17:13		17:59		19:47	20:32	21:04	20:11-20:33/22
15	07:48	15:41-15:54/13	07:08		06:12		06:07	05:14 05:38-05:47/9	04:49	20:11-20:33/22
	16:24	15:14-15:29/15	17:15		18:00		19:48	20:33	21:05	
16	07:47	15:41-15:55/14	07:06		06:10		06:05	05:13 05:37-05:48/11	04:49	20:12-20:34/22
	16:26	15:15-15:28/13	17:16		18:02		19:50	20:34	21:05	
17	07:47	15:41-15:57/16	07:04		06:08		06:03	05:11 05:36-05:49/13	04:49	20:12-20:34/22
	16:27	15:17-15:27/10	17:18		18:03		19:51	20:36	21:06	
18	07:46	15:40-15:58/18	07:02	16:51-16:53/2	06:06		06:01	05:10 05:35-05:50/15	04:49	20:12-20:35/23
	16:29	15:20-15:24/4	17:20		18:05		19:53	20:37	21:06	
19	07:45	15:40-16:00/20	07:01	16:49-16:55/6	06:04		05:59	05:09 05:34-05:50/16	04:49	20:12-20:35/23
	16:30		17:21		18:07		19:54	20:38	21:06	
20	07:44	15:40-16:01/21	06:59	16:48-16:57/9	06:02		05:57	05:07 05:32-05:50/18	04:49	20:12-20:35/23
	16:32		17:23		18:08		19:56	20:40	21:07	
21	07:43	15:41-16:03/22	06:57	16:47-16:59/12	06:00		05:55	05:06 05:31-05:50/19	04:50	20:13-20:36/23
	16:33		17:25		18:10		19:57	20:41	21:07	
22	07:42	15:41-16:05/24	06:55	16:47-17:01/14	05:57		05:53	05:05 05:30-05:50/20	04:50	20:13-20:36/23
	16:35		17:26		18:11		19:59	20:42	21:07	
23	07:41	15:40-16:04/24	06:53	16:46-17:03/17	05:55		05:51	05:04 05:29-05:50/21	04:50	20:13-20:36/23
	16:36		17:28		18:13		20:00	20:44	21:07	
24	07:40	16:06-16:08/2	06:51	16:46-17:05/19	05:53		05:49	05:03 05:28-05:50/22	04:50	20:13-20:36/23
	16:38	15:41-16:05/24	17:30		18:14		20:02	20:45	21:07	
25	07:39	15:41-16:10/29	06:49	16:46-17:07/21	05:51		05:47	05:02 05:28-05:50/22	04:51	20:14-20:36/22
	16:39		17:31		18:16		20:03	20:46	21:07	
26	07:38	15:42-16:12/30	06:47	16:46-17:08/22	05:49		05:45	05:01 05:29-05:51/22	04:51	20:14-20:36/22
	16:41		17:33		18:17		20:05	20:47	21:07	
27	07:37	15:42-16:13/31	06:45	16:46-17:10/24	05:47		05:43	05:00 05:29-05:51/22	04:51	20:14-20:37/23
	16:43		17:35		18:19		20:06	20:48 20:17-20:19/2	21:07	
28	07:35	15:43-16:15/32	06:43	16:46-17:11/25	05:44		05:42	04:59 05:29-05:51/22	04:52	05:45-05:46/1
	16:44		17:36		18:21		20:08	20:49 20:15-20:20/5	21:07	20:14-20:36/22
29	07:34	15:44-16:17/33			06:42		05:40	04:58 05:29-05:50/21	04:52	05:44-05:48/4
	16:46				19:22		20:10	20:51 20:14-20:21/7	21:07	20:15-20:37/22
30	07:33	15:44-16:19/35			06:40		05:38	04:57 05:29-05:50/21	04:53	05:43-05:49/6
	16:48				19:24		20:11	20:52 20:13-20:21/8	21:07	20:15-20:36/21
31	07:31	15:46-16:21/35			06:38			04:56 05:31-05:51/20		
	16:49				19:25			20:53 20:13-20:23/10		
Potential sun hours	269		283		368		411	475	486	
Sum of minutes with flicker	843		481		143		0	358	794	

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

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

Project: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar per WTG

WTG: 1 - V1

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:53 05:42-05:50/8 21:07 20:15-20:36/21	05:26 06:11 06:55 20:39 19:42 18:37			06:44 15:33-15:53/20 16:36	07:30 15:26-15:30/4 16:00 14:52-15:12/20
2	04:54 05:41-05:51/10 21:07 20:15-20:35/20	05:28 06:12 06:56 20:37 19:40 18:35			06:45 15:31-15:53/22 16:35	07:31 15:27-15:29/2 16:00 14:52-15:13/21
3	04:55 05:41-05:52/11 21:06 20:16-20:35/19	05:29 06:14 06:58 20:36 19:38 18:33			06:47 15:31-15:54/23 16:33	07:33 14:51-15:13/22 15:59
4	04:55 05:41-05:53/12 21:06 20:16-20:35/19	05:30 06:15 06:59 20:34 19:36 18:31			06:48 15:30-15:55/25 16:31	07:34 14:52-15:14/22 15:59
5	04:56 05:40-05:53/13 21:06 20:16-20:34/18	05:32 06:17 07:01 20:33 19:33 18:29			06:50 15:30-15:56/26 16:30	07:35 14:52-15:15/23 15:58
6	04:57 05:40-05:54/14 21:05 20:17-20:34/17	05:33 06:18 07:02 20:31 19:31 18:27		17:32-17:40/8	06:52 15:29-15:55/26 16:28	07:36 14:47-15:15/28 15:58
7	04:58 05:40-05:55/15 21:05 20:17-20:34/17	05:35 06:20 07:04 20:29 19:29 18:25		17:29-17:44/15	06:53 15:30-15:55/25 16:27	07:38 14:46-15:15/29 15:58
8	04:59 05:40-05:56/16 21:04 20:18-20:34/16	05:36 06:21 07:06 20:28 19:27 18:23		17:26-17:44/18	06:55 15:30-15:56/26 16:25	07:39 14:46-15:17/31 15:57
9	04:59 05:39-05:57/18 21:04 20:19-20:33/14	05:38 06:23 07:07 20:26 19:25 18:20		17:25-17:46/21	06:57 15:20-15:55/35 16:24	07:40 14:45-15:17/32 15:57
10	05:00 05:39-05:57/18 21:03 20:18-20:32/14	05:39 06:24 07:09 20:24 19:23 18:18		17:24-17:47/23	06:58 15:17-15:53/36 16:22	07:41 14:45-15:18/33 15:57
11	05:01 05:38-05:57/19 21:02 20:19-20:31/12	05:40 06:26 07:10 20:23 19:21 18:16		17:23-17:47/24	07:00 15:16-15:52/36 16:21	07:42 14:45-15:18/33 15:57
12	05:02 05:38-05:58/20 21:02 20:20-20:31/11	05:42 06:27 07:12 20:21 19:18 18:14		17:22-17:47/25	07:01 15:16-15:50/34 16:19	07:43 14:45-15:18/33 15:57
13	05:03 05:38-05:58/20 21:01 20:21-20:30/9	05:43 06:28 07:13 20:19 19:16 18:12		17:20-17:45/25	07:03 15:16-15:49/33 16:18	07:44 14:45-15:19/34 15:57
14	05:04 05:38-05:59/21 21:00 20:22-20:30/8	05:45 06:30 07:15 20:17 19:14 18:10		17:19-17:43/24	07:05 15:15-15:47/32 16:17	07:45 14:45-15:20/35 15:57
15	05:05 05:38-05:59/21 20:59 20:23-20:29/6	05:46 06:31 07:16 20:15 19:12 18:08		17:18-17:42/24	07:06 15:15-15:46/31 16:15	07:46 14:46-15:20/34 15:57
16	05:06 05:37-05:59/22 20:58 20:24-20:28/4	05:48 06:33 07:18 20:14 19:10 18:06		17:17-17:39/22	07:08 15:15-15:45/30 16:14	07:46 14:45-15:20/35 15:57
17	05:07 05:37-06:00/23 20:57	05:49 06:34 07:19 20:12 19:08 18:04		17:17-17:37/20	07:09 15:15-15:44/29 16:13	07:47 14:46-15:21/35 15:58
18	05:09 05:37-06:00/23 20:56	05:51 06:36 07:21 20:10 19:05 18:02		17:18-17:36/18	07:11 15:40-15:42/2 16:12	07:48 14:46-15:21/35 15:58
19	05:10 05:38-06:01/23 20:55	05:52 06:37 07:23 20:08 19:03 18:00		17:17-17:33/16	07:13 15:15-15:39/24 16:11	07:49 14:46-15:21/35 15:58
20	05:11 05:39-06:01/22 20:54	05:53 06:39 07:24 20:06 19:01 17:58		17:18-17:31/13	07:14 15:16-15:40/24 16:10	07:49 14:47-15:22/35 15:58
21	05:12 05:40-06:01/21 20:53	05:55 06:40 07:26 20:04 18:59 17:56		17:18-17:29/11	07:16 15:16-15:38/22 16:09	07:50 14:48-15:23/35 15:59
22	05:13 05:41-06:01/20 20:52	05:56 06:42 07:27 20:02 18:57 17:54		17:19-17:27/8	07:17 15:16-15:38/22 16:08	07:50 14:48-15:23/35 15:59
23	05:15 05:42-06:00/18 20:51	05:58 06:43 07:29 20:00 18:55 17:52		17:20-17:25/5	07:19 15:17-15:37/20 16:07	07:51 14:48-15:23/35 16:00
24	05:16 05:43-06:00/17 20:50	05:59 06:45 07:31 19:58 18:52 17:51		17:22-17:23/1	07:20 15:18-15:35/17 16:06	07:51 14:49-15:24/35 16:00
25	05:17 05:45-06:01/16 20:48	06:01 06:46 06:32 19:56 18:50 16:49			07:22 15:19-15:35/16 16:05	07:52 14:49-15:24/35 16:01
26	05:18 05:46-06:00/14 20:47	06:02 06:47 06:34 19:54 18:48 16:47			07:23 15:19-15:33/14 16:04	07:52 14:49-15:24/35 16:02
27	05:20 05:47-05:59/12 20:46	06:04 06:49 06:35 19:52 18:46 16:45			07:25 15:20-15:33/13 16:03	07:52 14:51-15:26/35 16:02
28	05:21 05:48-05:58/10 20:44	06:05 06:50 06:37 19:50 18:44 16:43			07:26 15:21-15:31/10 16:02	07:53 14:51-15:26/35 16:03
29	05:22 05:49-05:57/8 20:43	06:07 06:52 06:39 19:48 18:42 16:42		15:37-15:48/11	07:27 15:23-15:31/8 16:02	07:53 14:52-15:26/34 16:04
30	05:24 05:51-05:57/6 20:42	06:08 06:53 06:40 19:46 18:39 16:40		15:35-15:50/15	07:29 15:24-15:30/6 16:01	07:53 14:53-15:27/34 16:05
31	05:25 05:52-05:55/3 20:40	06:09 06:54 06:42 19:44 16:38		15:34-15:52/18		07:53 14:54-15:27/33 16:06
Potential sun hours	490	447	379	335	275	256
Sum of minutes with flicker	719	0	0	365	812	992

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

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

Project: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar per WTG

WTG: 2 - V2

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January	February	March	April	May	June
1	07:53 15:29-15:35/6 16:07 14:40-15:11/31	07:30 15:33-16:22/49 16:51 15:35-16:25/50	06:41 17:05-17:13/8 17:38 16:35-17:00/25	06:36 18:35-19:02/27 19:27 17:02-17:14/12	05:36 20:13 20:13 04:55	04:55 20:54
2	07:53 15:29-15:36/7 16:08 14:41-15:12/31	07:29 15:35-16:25/50 16:53 15:37-16:26/49	06:39 17:02-17:14/12 17:40 16:36-16:59/23	06:34 18:37-19:04/27 19:28 18:39-19:05/26	05:34 20:14 20:14 04:54	04:54 20:55
3	07:53 15:28-15:37/9 16:09 14:42-15:11/29	07:27 15:37-16:26/49 16:54 15:40-16:28/48	06:37 17:00-17:16/16 17:41 16:37-16:57/20	06:32 18:39-19:05/26 19:30 18:40-19:04/24	05:33 20:16 20:16 04:53	04:53 20:57
4	07:53 15:28-15:38/10 16:10 14:43-15:12/29	07:26 15:40-16:28/48 16:56 15:49-16:30/41	06:35 16:59-17:18/19 17:43 16:39-16:56/17	06:30 18:40-19:04/24 19:31 18:40-19:03/23	05:31 20:17 20:17 04:53	04:53 20:57
5	07:53 15:28-15:40/12 16:11 14:44-15:12/28	07:24 15:49-16:30/41 16:58 15:50-16:31/41	06:33 16:58-17:20/22 17:44 16:41-16:53/12	06:27 18:40-19:03/23 19:33 18:41-19:02/21	05:29 20:19 20:19 04:52	04:52 20:58
6	07:52 15:27-15:40/13 16:12 14:45-15:11/26	07:23 15:50-16:31/41 16:59 15:50-16:31/41	06:31 16:57-17:21/24 17:46 16:56-17:23/27	06:25 18:41-19:02/21 19:34 18:42-19:01/19	05:28 20:20 20:20 04:52	04:52 20:59
7	07:52 15:27-15:42/15 16:14 14:47-15:12/25	07:21 15:50-16:31/41 17:01 15:51-16:31/40	06:29 16:56-17:23/27 17:48 16:56-17:24/28	06:23 18:42-19:01/19 19:36 18:43-18:59/16	05:26 20:21 20:21 04:51	04:51 21:00
8	07:52 15:26-15:43/17 16:15 14:49-15:11/22	07:20 15:51-16:31/40 17:03 15:53-16:32/39	06:27 16:56-17:24/28 17:49 16:56-17:24/28	06:21 18:43-18:59/16 19:37 18:45-18:55/10	05:24 20:23 20:23 04:51	04:51 21:01
9	07:51 15:27-15:45/18 16:16 14:50-15:12/22	07:18 15:53-16:32/39 17:04 15:54-16:32/38	06:25 16:56-17:24/28 17:51 16:56-17:24/28	06:19 18:45-18:55/10 19:39 16:56-17:24/28	05:23 20:24 20:24 04:51	04:51 21:02
10	07:51 15:26-15:46/20 16:17 14:51-15:11/20	07:16 15:54-16:32/38 17:06 15:55-16:32/37	06:17 16:56-17:24/28 17:52 16:55-17:23/28	06:17 16:56-17:24/28 19:41 16:55-17:23/28	05:21 20:26 20:26 04:50	04:50 21:03
11	07:51 15:27-15:48/21 16:19 14:53-15:11/18	07:15 15:55-16:32/37 17:08 15:58-16:31/33	06:21 16:55-17:23/28 17:54 16:55-17:22/27	06:15 16:55-17:22/27 19:42 16:55-17:21/26	05:20 20:27 20:27 04:50	04:50 21:04
12	07:50 15:26-15:49/23 16:20 14:54-15:10/16	07:13 15:58-16:31/33 17:10 16:05-16:32/27	06:19 16:55-17:22/27 17:56 16:55-17:21/26	06:13 16:55-17:22/27 19:44 16:55-17:21/26	05:18 20:29 20:29 04:50	04:50 21:05
13	07:49 15:26-15:50/24 16:21 14:56-15:09/13	07:11 16:05-16:32/27 17:11 16:05-16:31/26	06:17 16:55-17:21/26 17:57 16:56-17:20/24	06:11 16:55-17:21/26 19:45 16:56-17:20/24	05:17 20:30 20:30 04:50	04:50 21:06
14	07:49 15:27-15:52/25 16:23 14:59-15:08/9	07:10 16:05-16:31/26 17:13 16:06-16:30/24	06:14 16:56-17:20/24 17:59 16:57-17:19/22	06:09 16:56-17:20/24 19:47 16:57-17:19/22	05:15 20:32 20:32 04:49	04:49 21:07
15	07:48 15:26-15:54/28 16:24 15:26-15:55/29	07:08 16:06-16:30/24 17:15 16:48-16:50/2	06:12 16:57-17:19/22 18:00 16:59-17:18/19	06:07 16:57-17:19/22 19:48 16:59-17:18/19	05:14 20:33 20:33 04:49	04:49 21:08
16	07:47 15:26-15:55/29 16:26 15:26-15:56/30	07:06 16:48-16:50/2 17:16 16:07-16:29/22	06:10 16:59-17:18/19 18:02 17:01-17:15/14	06:05 16:59-17:18/19 19:50 17:01-17:15/14	05:13 20:34 20:34 04:49	04:49 21:09
17	07:47 15:26-15:56/30 16:27 15:26-15:56/30	07:04 16:43-16:52/9 17:18 16:08-16:28/20	06:08 17:01-17:15/14 18:03 16:08-16:28/20	06:03 17:01-17:15/14 19:51 16:08-16:28/20	05:11 20:36 20:36 04:49	04:49 21:10
18	07:46 15:26-15:56/30 16:28 15:26-15:56/30	07:03 16:40-16:53/13 17:20 16:09-16:26/17	06:06 17:03-17:11/8 18:05 17:03-17:11/8	06:01 17:03-17:11/8 19:53 17:03-17:11/8	05:10 20:37 20:37 04:49	04:49 21:11
19	07:45 15:26-16:00/34 16:30 15:26-16:00/34	07:01 16:39-16:55/16 17:21 16:12-16:23/11	06:04 17:41-17:42/1 18:07 16:39-16:55/16	05:59 17:41-17:42/1 19:54 16:39-16:55/16	05:09 20:38 20:38 04:49	04:49 21:12
20	07:44 15:27-16:01/34 16:32 15:27-16:01/34	06:59 16:38-16:57/19 17:23 16:38-16:57/19	06:02 17:39-17:44/5 18:08 17:39-17:44/5	05:57 17:39-17:44/5 19:56 17:39-17:44/5	05:07 20:40 20:40 04:49	04:49 21:13
21	07:43 15:27-16:03/36 16:33 15:27-16:03/36	06:57 16:36-16:59/23 17:25 16:37-17:01/24	06:00 17:37-17:46/9 18:10 17:37-17:46/9	05:55 17:37-17:46/9 19:57 17:37-17:46/9	05:06 20:41 20:41 04:50	04:50 21:14
22	07:42 15:27-16:05/38 16:35 15:27-16:05/38	06:55 16:37-17:01/24 17:26 16:37-17:01/24	05:57 17:36-17:47/11 18:11 17:36-17:47/11	05:53 17:36-17:47/11 19:59 17:36-17:47/11	05:05 20:42 20:42 04:50	04:50 21:15
23	07:41 15:28-16:07/39 16:36 15:28-16:07/39	06:53 16:36-17:02/26 17:28 16:36-17:02/26	05:55 17:35-17:49/14 18:13 17:35-17:49/14	05:51 17:35-17:49/14 20:00 17:35-17:49/14	05:04 20:44 20:44 04:50	04:50 21:16
24	07:40 15:27-16:08/41 16:38 15:27-16:08/41	06:51 16:36-17:02/26 17:30 16:36-17:02/26	05:53 17:33-17:50/17 18:14 17:33-17:50/17	05:49 17:33-17:50/17 20:02 17:33-17:50/17	05:03 20:45 20:45 04:51	04:51 21:17
25	07:39 15:28-16:10/42 16:39 15:28-16:10/42	06:49 16:36-17:02/26 17:31 16:36-17:02/26	05:51 17:33-17:51/18 18:16 17:33-17:51/18	05:47 17:33-17:51/18 20:03 17:33-17:51/18	05:02 20:46 20:46 04:51	04:51 21:18
26	07:38 15:29-16:12/43 16:41 15:29-16:12/43	06:47 16:35-17:02/27 17:33 16:35-17:02/27	05:49 17:32-17:53/21 18:17 17:32-17:53/21	05:45 17:32-17:53/21 20:05 17:32-17:53/21	05:01 20:47 20:47 04:51	04:51 21:19
27	07:37 15:29-16:13/44 16:43 15:29-16:13/44	06:45 16:36-17:02/26 17:35 16:36-17:02/26	05:47 17:32-17:55/23 18:19 17:32-17:55/23	05:43 17:32-17:55/23 20:07 17:32-17:55/23	05:00 20:48 20:48 04:51	04:51 21:20
28	07:35 15:30-16:15/45 16:44 15:30-16:15/45	06:43 16:36-17:01/25 17:36 16:36-17:01/25	05:44 17:32-17:56/24 18:21 17:32-17:56/24	05:42 17:32-17:56/24 20:08 17:32-17:56/24	04:59 20:49 20:49 04:52	04:52 21:21
29	07:34 15:31-16:16/45 16:46 15:31-16:16/45	06:41 15:31-16:16/45 17:38 15:31-16:16/45	06:42 18:33-18:58/25 19:22 18:33-18:58/25	05:40 18:33-18:58/25 20:10 18:33-18:58/25	04:58 20:51 20:51 04:52	04:52 21:22
30	07:33 15:31-16:19/48 16:48 15:31-16:19/48	06:39 15:31-16:19/48 17:40 15:31-16:19/48	06:40 18:34-19:00/26 19:24 18:34-19:00/26	05:38 18:34-19:00/26 20:11 18:34-19:00/26	04:57 20:52 20:52 04:53	04:53 21:23
31	07:31 15:32-16:21/49 16:49 15:32-16:21/49	06:37 15:32-16:21/49 17:42 15:32-16:21/49	06:38 18:33-19:00/27 19:25 18:33-19:00/27	06:38 18:33-19:00/27 19:25 18:33-19:00/27	04:56 20:53 20:53 04:54	04:54 21:24
Potential sun hours	269	283	368	411	475	486
Sum of minutes with flicker	1194	915	698	193	0	0

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

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

SHADOW - Calendar per WTG

WTG: 2 - V2

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:53 21:07	05:26 20:39	06:11 19:42	06:55 17:35-18:02/27 18:37	06:44 15:23-16:02/39 16:36	07:30 15:09-15:30/21 16:00 14:35-14:53/18
2	04:54 21:07	05:28 20:37	06:12 19:40	06:56 17:34-18:01/27 18:35	06:45 15:21-16:01/40 16:35	07:31 15:09-15:29/20 16:00 14:34-14:54/20
3	04:55 21:06	05:29 20:36	06:14 19:38	06:58 17:33-18:02/29 18:33	06:47 15:20-16:01/41 16:33	07:33 15:10-15:28/18 15:59 14:33-14:55/22
4	04:55 21:06	05:30 20:34	06:15 19:36	06:59 17:32-18:01/29 18:31	06:48 15:20-16:01/41 16:31	07:34 15:11-15:28/17 15:59 14:34-14:56/22
5	04:56 21:06	05:32 20:33	06:17 19:33	07:01 17:33-18:01/28 18:29	06:50 15:19-16:01/42 16:30	07:35 15:12-15:27/15 15:58 14:32-14:57/25
6	04:57 21:05	05:33 20:31	06:18 19:31	07:02 17:32-18:00/28 18:27	06:52 15:18-15:59/41 16:28	07:36 15:13-15:26/13 15:58 14:31-14:58/27
7	04:58 21:05	05:35 20:29	06:20 19:29	07:04 17:33-17:58/25 18:25	06:53 15:09-15:58/49 16:27	07:38 15:14-15:26/12 15:58 14:31-14:58/27
8	04:59 21:04	05:36 20:28	06:21 19:27	07:06 17:32-17:56/24 18:23	06:55 15:07-15:57/50 16:25	07:39 15:16-15:26/10 15:57 14:31-15:00/29
9	04:59 21:04	05:38 20:26	06:23 19:25	07:07 17:33-17:54/21 18:20	06:57 15:06-15:55/49 16:24	07:40 15:17-15:26/9 15:57 14:31-15:00/29
10	05:00 21:03	05:39 20:24	06:24 19:23	07:09 17:35-17:52/17 18:18	06:58 15:04-15:53/49 16:22	07:41 15:18-15:25/7 15:57 14:30-15:01/31
11	05:01 21:02	05:40 20:23	06:26 19:21	07:10 17:35-17:49/14 18:16	07:00 15:03-15:52/49 16:21	07:42 15:19-15:25/6 15:57 14:30-15:02/32
12	05:02 21:02	05:42 20:21	06:27 19:19	07:12 17:37-17:48/11 18:14	07:01 15:03-15:50/47 16:19	07:43 15:21-15:25/4 15:57 14:30-15:02/32
13	05:03 21:01	05:43 20:19	06:28 19:16	07:13 17:40-17:45/5 18:12	07:03 15:03-15:48/45 16:18	07:44 15:22-15:25/3 15:57 14:31-15:03/32
14	05:04 21:00	05:45 20:17	06:30 19:14	07:15 17:08-17:34/26 18:10	07:05 15:01-15:47/46 16:17	07:45 14:31-15:04/33 15:57
15	05:05 20:59	05:46 20:15	06:31 19:12	07:16 17:08-17:34/26 18:08	07:06 15:02-15:46/44 16:15	07:46 14:31-15:04/33 15:57
16	05:06 20:58	05:48 20:14	06:33 19:10	07:18 17:07-17:34/27 18:06	07:08 15:02-15:45/43 16:14	07:46 14:31-15:04/33 15:57
17	05:07 20:57	05:49 20:12	06:34 19:08	07:19 17:07-17:34/27 18:04	07:09 15:02-15:44/42 16:13	07:47 14:31-15:05/34 15:57
18	05:09 20:56	05:51 20:10	06:36 19:05	07:21 17:07-17:34/27 18:02	07:11 15:01-15:42/41 16:12	07:48 14:32-15:06/34 15:58
19	05:10 20:55	05:52 20:08	06:37 19:03	07:23 17:07-17:33/26 18:00	07:13 15:02-15:41/39 16:11	07:49 14:32-15:05/33 15:58
20	05:11 20:54	05:53 20:06	06:39 19:01	07:24 17:07-17:31/24 17:58	07:14 15:02-15:40/38 16:10	07:49 14:32-15:06/34 15:58
21	05:12 20:53	05:55 20:04	06:40 18:59	07:26 17:08-17:29/21 17:56	07:16 15:02-15:38/36 16:09	07:50 14:33-15:07/34 15:59
22	05:13 20:52	05:56 20:02	06:42 18:57	07:27 17:08-17:27/19 17:54	07:17 15:03-15:38/35 16:07	07:50 14:33-15:07/34 15:59
23	05:15 20:51	05:58 20:00	06:43 18:55	07:29 17:10-17:25/15 17:52	07:19 15:03-15:37/34 16:07	07:51 14:33-15:07/34 16:00
24	05:16 20:50	05:59 19:58	06:45 18:52	07:31 17:12-17:23/11 17:51	07:20 15:03-15:33/30 16:06	07:51 14:34-15:08/34 16:00
25	05:17 20:48	06:01 19:56	06:46 18:50	06:32 16:13-16:21/8 16:49	07:22 15:04-15:34/30 16:05	07:52 14:35-15:09/34 16:01
26	05:18 20:47	06:02 19:54	06:47 18:48	06:34 15:36-15:59/23 16:47	07:23 15:04-15:33/29 16:04	07:52 14:35-15:09/34 16:02
27	05:20 20:46	06:04 19:52	06:49 18:46	06:35 15:35-16:00/25 16:45	07:25 15:05-15:33/28 16:03	07:52 14:36-15:10/34 16:02
28	05:21 20:44	06:05 19:50	06:50 18:44	06:37 15:35-16:01/26 16:43	07:26 15:06-15:31/25 16:02	07:53 14:37-15:10/33 16:03
29	05:22 20:43	06:07 19:48	06:52 18:42	06:39 15:34-16:01/27 16:42	07:27 15:07-15:31/24 16:02	07:53 14:38-15:10/32 16:04
30	05:24 20:42	06:08 19:46	06:53 18:39	06:40 15:27-16:01/34 16:40	07:29 15:07-15:30/23 16:01	07:53 15:31-15:33/2 16:05
31	05:25 20:40	06:09 19:44		06:42 15:25-16:02/37 16:38		07:53 15:30-15:34/4 16:06
Potential sun hours	490	447	379	335	275	256
Sum of minutes with flicker	0	0	527	882	1211	1109

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

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

SHADOW - Calendar per WTG

WTG: 3 - V3

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	January			February			March			April			May			June		
1	07:53	13:14-13:46/32	16:07	07:30	16:51	17:38	06:41	17:43	18:00-19:02/62	06:36	18:00-19:02/62	19:27	05:36	19:11-19:36/25	20:13	04:55	20:01-20:24/23	20:54
2	07:53	13:16-13:46/30	16:08	07:29	16:53	17:40	06:39	17:43	18:02-19:04/62	06:34	18:02-19:04/62	19:28	05:34	19:11-19:35/24	20:14	04:55	20:01-20:24/23	20:55
3	07:53	13:16-13:45/29	16:09	07:27	16:54	17:41	06:37	17:43	18:03-19:05/62	06:32	18:03-19:05/62	19:30	05:33	19:44-19:49/5	20:16	04:54	20:03-20:26/23	20:56
4	07:53	13:17-13:45/28	16:10	07:26	16:56	17:43	06:35	17:43	18:33-19:07/34	06:30	18:33-19:07/34	19:31	05:31	19:41-19:50/9	20:17	04:53	20:03-20:26/23	20:57
5	07:53	13:19-13:45/26	16:11	07:24	16:58	17:44	06:33	17:44	18:32-19:08/36	06:27	18:32-19:08/36	19:33	05:29	19:39-19:51/12	20:19	04:53	20:05-20:28/23	20:58
6	07:52	13:20-13:43/23	16:12	07:23	16:59	17:46	06:31	17:46	18:07-18:30/23	06:25	18:31-19:10/39	19:34	05:28	19:38-19:53/15	20:20	04:52	20:12-20:28/16	20:59
7	07:52	13:22-13:43/21	16:13	07:21	17:01	17:48	06:29	17:48	18:09-18:27/18	06:23	18:31-19:11/40	19:36	05:26	19:37-19:54/17	20:22	04:52	20:13-20:29/16	21:00
8	07:52	13:24-13:43/19	16:15	07:20	17:03	17:49	06:27	17:49	18:13-18:23/10	06:21	18:31-19:13/42	19:37	05:24	19:37-19:55/18	20:23	04:51	20:12-20:29/17	21:00
9	07:51	13:26-13:41/15	16:16	07:18	17:04	17:51	06:25	17:51	18:13-18:23/10	06:19	18:29-19:14/45	19:39	05:23	19:36-19:56/20	20:24	04:51	20:13-20:30/17	21:01
10	07:51	13:29-13:38/9	16:17	07:16	17:06	17:52	06:23	17:52	18:31-19:13/42	06:17	18:29-19:15/46	19:41	05:21	19:36-19:58/22	20:26	04:51	20:13-20:31/18	21:02
11	07:51		16:19	07:15	17:08	17:54	06:21	17:54	18:31-19:13/42	06:15	18:29-19:17/48	19:42	05:20	19:36-20:00/24	20:27	04:50	20:14-20:32/18	21:02
12	07:50		16:20	07:13	17:10	17:56	06:19	17:56	18:29-19:17/48	06:13	18:29-19:17/48	19:44	05:18	19:35-20:00/25	20:29	04:50	20:13-20:32/19	21:03
13	07:49		16:21	07:11	17:11	17:57	06:17	17:57	18:30-19:18/48	06:11	18:30-19:18/48	19:45	05:17	19:35-20:02/27	20:30	04:50	20:14-20:32/18	21:04
14	07:49		16:23	07:10	17:13	17:59	06:14	17:59	18:30-19:18/48	06:09	18:30-19:18/48	19:47	05:15	19:35-20:04/29	20:32	04:50	20:14-20:33/19	21:04
15	07:48		16:24	07:08	17:15	18:00	06:12	18:00	18:31-19:18/47	06:07	18:31-19:18/47	19:48	05:14	19:35-20:04/29	20:33	04:49	20:14-20:34/20	21:05
16	07:47		16:26	07:06	17:16	18:02	06:10	18:02	18:32-19:18/46	06:05	18:32-19:18/46	19:50	05:13	19:35-20:06/31	20:34	04:49	20:14-20:34/20	21:05
17	07:47		16:27	07:04	17:18	18:03	06:08	18:03	18:33-19:17/44	06:03	18:33-19:17/44	19:51	05:11	19:36-20:07/31	20:36	04:49	20:15-20:34/19	21:06
18	07:46		16:28	07:03	17:20	18:05	06:06	18:05	19:21-19:27/6	06:01	19:21-19:27/6	19:53	05:10	19:36-20:09/33	20:37	04:49	20:15-20:35/20	21:06
19	07:45		16:30	07:01	17:21	18:07	06:04	18:07	18:34-19:17/43	05:59	19:19-19:29/10	19:54	05:09	19:36-20:09/33	20:38	04:49	20:15-20:35/20	21:06
20	07:44		16:32	06:59	17:23	18:08	06:02	18:08	18:37-19:17/40	05:57	18:39-19:30/51	19:56	05:07	19:36-20:10/34	20:40	04:49	20:15-20:35/20	21:07
21	07:43		16:33	06:57	17:25	18:10	06:00	18:10	18:39-19:30/51	05:55	18:44-19:32/48	19:57	05:06	19:37-20:12/35	20:41	04:50	20:16-20:36/20	21:07
22	07:42		16:35	06:55	17:26	18:11	06:51	18:11	18:47-19:33/46	05:53	18:47-19:33/46	19:59	05:05	19:37-20:13/36	20:42	04:50	20:16-20:36/20	21:07
23	07:41		16:36	06:53	17:28	18:13	06:52	18:13	18:50-19:34/44	05:51	18:50-19:34/44	20:00	05:04	19:38-20:14/36	20:44	04:50	20:16-20:36/20	21:07
24	07:40		16:38	06:51	17:30	18:14	06:51	18:14	18:51-19:36/45	05:49	18:51-19:36/45	20:02	05:03	19:39-20:15/36	20:45	04:50	20:16-20:36/20	21:07
25	07:39		16:39	06:49	17:31	18:16	06:51	18:16	19:11-19:37/26	05:47	19:11-19:37/26	20:03	05:02	19:40-20:16/36	20:46	04:51	20:17-20:37/20	21:08
26	07:38		16:41	06:47	17:33	18:17	06:52	18:17	18:52-19:10/18	05:45	19:11-19:38/27	20:05	05:01	19:41-20:17/36	20:47	04:51	20:17-20:36/19	21:08
27	07:37		16:43	06:45	17:35	18:19	06:53	18:19	18:55-19:08/13	05:43	19:11-19:37/26	20:07	05:00	19:43-20:19/36	20:48	04:51	20:17-20:37/20	21:08
28	07:35		16:44	06:43	17:36	18:21	06:54	18:21	18:58-19:05/7	05:42	19:10-19:37/27	20:08	04:59	19:58-20:20/22	20:50	04:52	20:17-20:36/19	21:07
29	07:34		16:46				06:42	18:44-18:58/14	18:57-19:10/18	05:40	19:10-19:36/26	20:10	04:58	19:59-20:21/22	20:51	04:52	20:18-20:37/19	21:07
30	07:33		16:48				06:40	18:41-19:00/19	19:22 17:55-18:40/45	05:38	19:11-19:37/26	20:11	04:57	19:46-19:53/7	20:52	04:53	20:17-20:36/19	21:07
31	07:31		16:49				06:38	18:38-19:00/22	19:24 17:57-18:39/42				04:56	19:59-20:22/23	20:53			
Potential sun hours	269			283			368		411				475			486		
Sum of minutes with flicker	232			0			1068		1404				920			591		

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

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

Project: Sazomin
Description: Sazomin
Sazomin

Licensed user:
Integra Consulting Ltd.
Sudoměřská 1243/25
CZ-130 00 Praha 3
+420 724 110 779
Integra Consulting / windpro@integracons.com
Calculated:
29.05.2025 12:47/4.1.273

SHADOW - Calendar per WTG

WTG: 3 - V3

Assumptions for shadow calculations

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

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,21	3,46	4,25	5,75	7,79	7,45	8,46	7,89	5,56	4,46	1,95	1,94

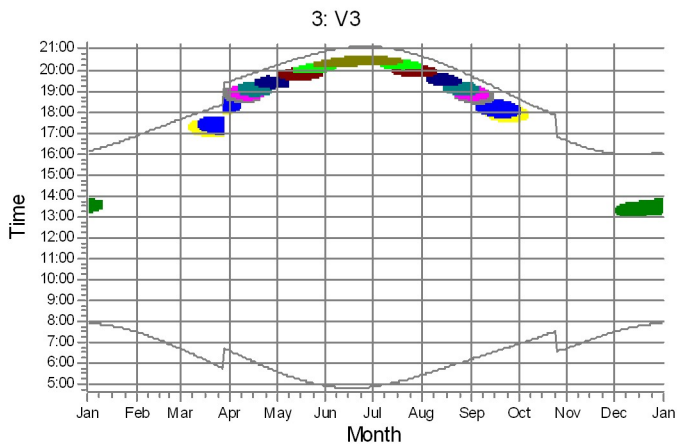
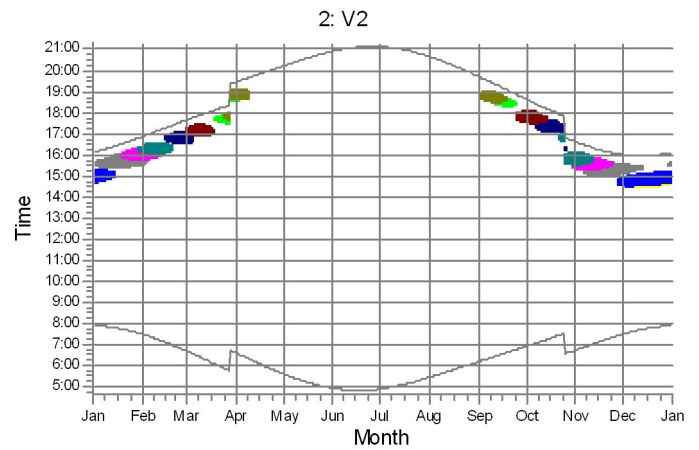
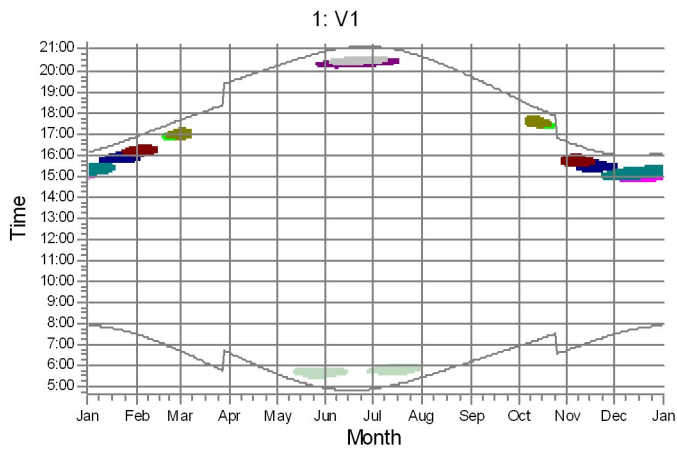
No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.

	July	August	September	October	November	December
1	04:53 20:18-20:36/18 21:07	05:26 19:45-20:10/25 20:39	06:11 18:29-19:17/48 19:42	06:55 17:37-18:11/34 18:37	06:44 16:36 16:00	07:30 13:13-13:20/7
2	04:54 20:17-20:35/18 21:07	05:28 19:45-20:09/24 20:37	06:12 18:28-19:14/46 19:40	06:56 17:37-18:08/31 18:35	06:45 16:35 16:00	07:31 13:10-13:24/14
3	04:55 20:18-20:35/17 21:06	05:29 19:46-20:08/22 20:36	06:14 18:27-19:12/45 19:38	06:58 17:39-18:07/28 18:33	06:47 16:33 15:59	07:33 13:09-13:27/18
4	04:55 20:18-20:35/17 21:06	05:30 19:46-20:06/20 20:34	06:15 18:28-19:10/42 19:36	06:59 17:40-18:04/24 18:31	06:48 16:31 15:59	07:34 13:07-13:28/21
5	04:56 20:18-20:34/16 21:06	05:32 19:47-20:04/17 20:33	06:17 18:27-19:08/41 19:33	07:01 17:43-18:02/19 18:29	06:50 16:30 15:58	07:35 13:06-13:29/23
6	04:57 20:18-20:34/16 21:05	05:33 19:48-20:04/16 20:31	06:18 18:28-19:06/38 19:31	07:03 17:45-17:57/12 18:27	06:52 16:28 15:58	07:36 13:06-13:32/26
7	04:58 20:19-20:34/15 21:05	05:35 19:48-20:02/14 20:29	06:20 18:27-19:04/37 19:29	07:04 18:02-18:25/23 18:25	06:53 16:27 15:58	07:38 13:05-13:33/28
8	04:59 20:11-20:34/23 21:04	05:36 19:49-20:00/11 20:28	06:21 18:27-19:01/34 19:27	07:06 17:59-18:26/27 18:23	06:55 16:25 15:57	07:39 13:05-13:34/29
9	04:59 20:10-20:33/23 21:04	05:38 19:51-19:59/8 20:26	06:23 17:58-19:00/62 19:25	07:07 18:20 18:20	06:57 16:24 15:57	07:40 13:05-13:35/30
10	05:00 20:09-20:32/23 21:03	05:39 19:53-19:57/4 20:24	06:24 17:56-18:57/61 19:23	07:09 18:18 18:18	06:58 16:22 15:57	07:41 13:04-13:36/32
11	05:01 20:09-20:32/23 21:02	05:40 19:19-19:44/25 20:23	06:26 17:54-18:55/61 19:21	07:10 18:16 18:16	07:00 16:21 15:57	07:42 13:04-13:37/33
12	05:02 20:08-20:31/23 21:02	05:42 19:19-19:45/26 20:21	06:27 18:30-18:53/23 19:19	07:12 17:50-18:29/39 18:14	07:02 16:19 15:57	07:43 13:04-13:37/33
13	05:03 20:08-20:30/22 21:01	05:43 19:18-19:44/26 20:19	06:28 18:31-18:50/19 19:16	07:13 18:12 18:12	07:03 16:18 15:57	07:44 13:05-13:38/33
14	05:04 20:07-20:30/23 21:00	05:45 19:19-19:45/26 20:17	06:30 18:34-18:49/15 19:14	07:15 17:46-18:30/44 18:10	07:05 16:17 15:57	07:45 13:05-13:39/34
15	05:05 20:07-20:29/22 20:59	05:46 19:18-19:45/27 20:15	06:31 18:38-18:43/5 19:12	07:16 17:43-18:30/47 18:08	07:06 16:15 15:57	07:46 13:04-13:39/35
16	05:06 20:07-20:28/21 20:58	05:48 19:17-19:44/27 20:14	06:33 17:42-18:30/48 19:10	07:18 18:06 18:06	07:08 16:14 15:57	07:47 13:05-13:40/35
17	05:07 19:51-20:27/36 20:57	05:49 19:18-19:44/26 20:12	06:34 17:41-18:30/49 19:08	07:19 18:04 18:04	07:10 16:13 15:57	07:48 13:05-13:41/36
18	05:09 19:50-20:26/36 20:56	05:50 18:58-19:43/45 20:10	06:36 17:40-18:30/50 19:06	07:21 18:02 18:02	07:11 16:12 15:58	07:49 13:05-13:41/36
19	05:10 19:49-20:25/36 20:55	05:52 18:56-19:41/45 20:08	06:37 17:38-18:29/51 19:03	07:23 18:00 18:00	07:13 16:11 15:58	07:50 13:06-13:42/36
20	05:11 19:48-20:24/36 20:54	05:53 18:55-19:40/45 20:06	06:39 17:37-18:28/51 19:01	07:24 17:58 17:58	07:14 16:10 15:58	07:51 13:07-13:43/36
21	05:12 19:48-20:24/36 20:53	05:55 18:51-19:37/46 20:04	06:40 17:37-18:28/51 18:59	07:26 17:56 17:56	07:16 16:08 15:59	07:52 13:07-13:43/36
22	05:13 19:48-20:23/35 20:52	05:56 18:49-19:36/47 20:02	06:42 17:36-18:27/51 18:57	07:27 17:54 17:54	07:17 16:07 15:59	07:53 13:08-13:44/36
23	05:15 19:47-20:22/35 20:51	05:58 19:21-19:34/13 20:00	06:43 17:36-18:26/50 18:55	07:29 17:52 17:52	07:19 16:06 16:00	07:54 13:08-13:44/36
24	05:16 19:46-20:20/34 20:50	05:59 19:22-19:32/10 19:58	06:45 17:35-18:25/50 18:52	07:31 17:51 17:51	07:20 16:06 16:00	07:55 13:08-13:44/36
25	05:17 19:46-20:19/33 20:48	06:01 19:25-19:30/5 19:56	06:46 17:35-18:24/49 18:50	06:32 16:49 16:49	07:22 16:05 16:01	07:56 13:09-13:44/35
26	05:18 19:46-20:19/33 20:47	06:02 18:35-19:20/45 19:54	06:47 17:35-18:22/47 18:48	06:34 16:47 16:47	07:23 16:04 16:02	07:57 13:10-13:45/35
27	05:20 19:46-20:17/31 20:46	06:04 18:34-19:21/47 19:52	06:49 17:35-18:20/45 18:46	06:35 16:45 16:45	07:25 16:03 16:02	07:58 13:11-13:45/34
28	05:21 19:45-20:16/31 20:45	06:05 18:33-19:20/47 19:50	06:50 17:35-18:18/43 18:44	06:37 16:43 16:43	07:26 16:02 16:03	07:59 13:11-13:45/34
29	05:22 19:45-20:14/29 20:43	06:07 18:31-19:19/48 19:48	06:52 17:36-18:16/40 18:42	06:39 16:42 16:42	07:27 16:01 16:04	08:00 13:12-13:45/33
30	05:24 19:46-20:14/28 20:42	06:08 18:31-19:19/48 19:46	06:53 17:36-18:13/37 18:39	06:40 16:40 16:40	07:29 16:01 16:05	08:01 13:13-13:46/33
31	05:25 19:46-20:12/26 20:40	06:09 18:29-19:17/48 19:44		06:42 16:38 16:38	07:53 16:06 16:06	
Potential sun hours	490	447	379	335	275	256
Sum of minutes with flicker	850	1135	1539	148	0	923

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

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

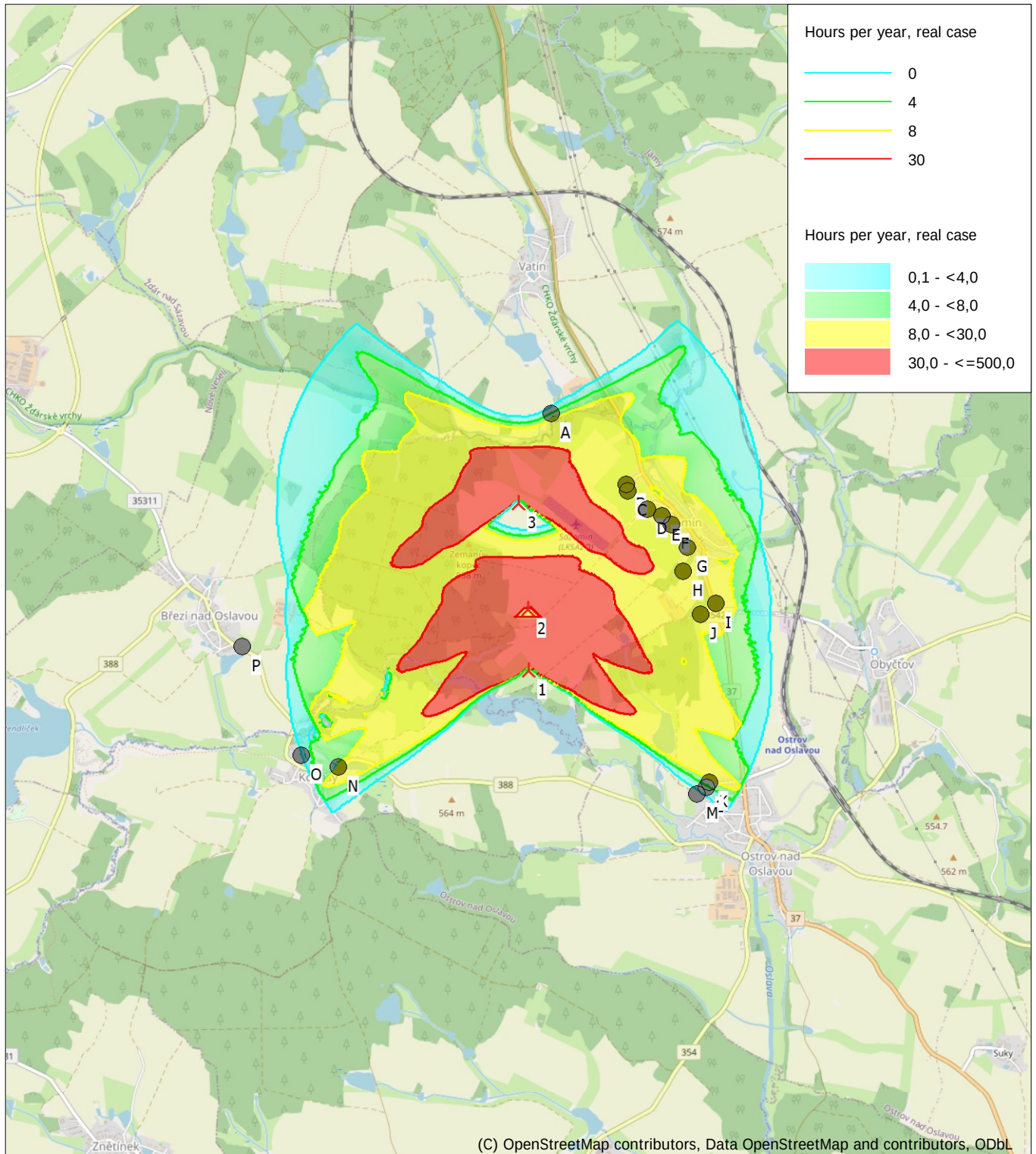
SHADOW - Calendar per WTG, graphical



Shadow receptors

	A: RB1		E: RB5		I: RB9		N: RB14
	B: RB2		F: RB6		J: RB10		
	C: RB3		G: RB7		K: RB11		
	D: RB4		H: RB8		L: RB12		

SHADOW - Map



Map: EMD OpenStreetMap , Print scale 1:40 000, Map center Geo WGS84 East: 15,964547° E North: 49,504683° N
 New WTG
 Shadow receptor
 Flicker map level: Project Wizard Elevation Data Grid (Czech Republic DTM - 20m grid)
 Time step: 2 minutes, Day step: 3 days, Map resolution: 10 m, Visibility resolution: 5 m, Eye height: 1,5 m