

Project:

Koncepce území zelená Haná

Licensed user:

Jipocar Power s.r.o
Stritez 3
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Calculated:

20.03.2025 8:32/4.1.273

SHADOW - Calendar

Calculation: Shadow Test Shadow receptor: A - Kovalovice #92

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December	
1	07:47 16:02	07:24 16:46	06:36 17:33	06:31 19:21	05:31 20:07	04:51 20:48	04:49 21:01	05:17 (1) 05:30 (1)	05:22 20:33	06:06 19:36	06:50 18:32	06:38 16:31	07:24 15:56
2	07:47 16:03	07:23 16:48	06:34 17:34	06:29 19:23	05:30 20:08	04:50 20:49	04:50 21:00	05:18 (1) 05:30 (1)	05:23 20:31	06:07 19:34	06:51 18:30	06:39 16:30	07:25 15:55
3	07:47 16:05	07:21 16:50	06:32 17:36	06:27 19:24	05:28 20:10	04:50 20:50	04:50 21:00	05:16 (1) 05:19 (1)	05:24 20:30	06:09 19:32	06:53 18:28	06:41 16:28	07:27 15:55
4	07:47 16:06	07:20 16:51	06:30 17:38	06:24 19:26	05:26 20:11	04:49 20:51	04:51 21:00	05:16 (1) 05:21 (1)	05:26 20:28	06:10 19:30	06:54 18:26	06:43 16:27	07:28 15:54
5	07:47 16:07	07:18 16:53	06:28 17:39	06:22 19:27	05:25 20:13	04:48 20:51	04:52 20:59	05:15 (1) 05:21 (1)	05:27 (1) 20:27	06:12 19:28	06:56 18:24	06:44 16:25	07:29 15:54
6	07:46 16:08	07:17 16:55	06:26 17:41	06:20 19:29	05:23 20:14	04:48 20:52	04:53 20:59	05:15 (1) 05:23 (1)	05:29 (1) 20:25	06:13 19:26	06:57 18:22	06:46 16:23	07:30 15:54
7	07:46 16:09	07:15 16:56	06:24 17:42	06:18 19:30	05:21 20:16	04:47 20:53	04:53 20:58	05:14 (1) 05:23 (1)	05:30 20:23	06:15 19:24	06:59 18:19	06:48 16:22	07:31 15:53
8	07:46 16:10	07:14 16:58	06:22 17:44	06:16 19:32	05:20 20:17	04:47 20:54	04:54 20:58	05:22 (1) 05:27 (1)	05:31 20:22	06:16 19:22	07:00 18:17	06:49 16:20	07:33 15:53
9	07:45 16:11	07:12 17:00	06:20 17:46	06:14 19:33	05:18 20:18	04:47 20:55	04:55 20:57	05:23 (1) 05:25 (1)	05:33 20:20	06:17 19:19	07:02 18:15	06:51 16:19	07:34 15:53
10	07:45 16:13	07:11 17:01	06:17 17:47	06:12 19:35	05:17 20:20	04:46 20:55	04:56 20:57	05:24 (1) 05:26 (1)	05:34 20:18	06:19 19:17	07:03 18:13	06:52 16:17	07:35 15:53
11	07:44 16:14	07:09 17:03	06:15 17:49	06:10 19:36	05:15 20:21	04:46 20:56	04:57 20:56	05:13 (1) 05:25 (1)	05:36 20:17	06:20 19:15	07:05 18:11	06:54 16:16	07:36 15:53
12	07:44 16:15	07:07 17:05	06:13 17:50	06:08 19:38	05:14 20:23	04:46 20:57	04:58 20:55	05:13 (1) 05:26 (1)	05:37 20:15	06:22 19:13	07:06 18:09	06:56 16:15	07:37 15:52
13	07:43 16:17	07:06 17:06	06:11 17:52	06:06 19:40	05:12 20:24	04:45 20:57	04:59 20:55	05:13 (1) 05:27 (1)	05:38 20:13	06:23 19:11	07:08 18:07	06:57 16:13	07:38 15:52
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15	07:42 16:20	07:02 17:10	06:07 17:55	06:02 19:43	05:09 20:27	04:45 20:58	05:01 20:53	05:13 (1) 05:28 (1)	05:41 20:10	06:26 19:07	07:11 18:03	07:00 16:11	07:39 15:53
16	07:41 16:21	07:00 17:11	06:05 17:57	06:00 19:44	05:08 20:28	04:45 20:59	05:02 20:52	05:13 (1) 05:28 (1)	05:43 20:08	06:28 19:04	07:12 18:01	07:02 16:09	07:40 15:53
17	07:41 16:22	06:59 17:13	06:03 17:58	05:58 19:46	05:07 20:30	04:45 20:59	05:03 20:51	05:13 (1) 05:28 (1)	05:44 20:06	06:29 19:02	07:14 17:59	07:04 16:08	07:41 15:53
18	07:40 16:24	06:57 17:15	06:01 18:00	05:56 19:47	05:05 20:31	04:45 21:00	05:04 20:50	05:13 (1) 05:29 (1)	05:46 20:04	06:30 19:00	07:15 17:57	07:05 16:07	07:42 15:53
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28	07:29 16:40	06:38 17:31	05:39 18:15	05:37 20:02	04:54 20:43	04:47 21:01	05:16 20:38	05:16 (1) 05:30 (1)	06:00 19:44	06:45 18:39	07:31 16:38	07:20 15:58	07:46 15:59
29	07:28 16:41		06:37 19:17	05:35 20:04	04:53 20:44	04:48 21:01	05:18 20:37	05:16 (1) 05:30 (1)	06:02 19:42	06:47 18:36	07:32 16:37	07:21 15:57	07:47 16:00
30	07:27 16:43		06:35 19:18	05:33 20:05	04:53 20:46	04:48 21:01	05:19 20:36	05:17 (1) 05:30 (1)	06:03 19:40	06:48 18:34	07:33 16:35	07:23 15:56	07:47 16:00
31	07:26 16:45		06:33 19:20		04:52 20:47		05:20 20:34		06:04 19:38		06:36 16:33		07:47 16:01
Potential sun hours	270	283	368	411	475	485	490		446	379	335	275	256
Total, worst case						361		81					

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

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

SHADOW - Calendar

Calculation: Shadow Test Shadow receptor: B - Pupuvky #73

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:47 16:02	07:24 16:46	06:36 17:33	06:31 19:21	05:31 20:07	04:51 20:48	04:49 21:01	05:22 20:33	06:06 19:36	06:50 18:32	06:38 16:31	07:24 15:56
2	07:47 16:03	07:23 16:48	06:34 17:34	06:29 19:23	05:30 20:08	04:50 20:49	04:50 21:00	05:23 20:31	06:07 19:34	06:51 18:30	06:39 16:30	07:25 15:55
3	07:47 16:04	07:21 16:49	06:32 17:36	06:26 19:24	05:28 20:10	04:50 20:50	04:50 21:00	05:24 20:30	06:09 19:32	06:53 18:28	06:41 16:28	07:27 15:55
4	07:47 16:05	07:20 16:51	06:30 17:38	06:24 19:26	05:26 20:11	04:49 20:51	04:51 21:00	05:26 20:28	06:10 19:30	06:54 18:26	06:43 16:26	07:28 15:54
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10	07:45 16:13	07:11 17:01	06:17 17:47	06:12 19:35	05:17 20:20	04:46 20:55	04:56 20:57	05:34 20:18	06:19 19:17	07:03 18:13	06:52 16:17	07:35 15:53
11	07:44 16:14	07:09 17:03	06:15 17:49	06:10 19:36	05:15 20:21	04:46 20:56	04:57 20:56	05:36 20:17	06:20 19:15	07:05 18:11	06:54 16:16	07:36 15:52
12	07:44 16:15	07:07 17:05	06:13 17:50	06:08 19:38	05:14 20:23	04:45 20:57	04:58 20:55	05:37 20:15	06:22 19:13	07:06 18:09	06:56 16:15	07:37 15:52
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14	07:43 16:18	07:04 17:08	06:09 17:53	06:04 19:41	05:11 20:26	04:45 20:58	05:00 20:54	05:40 20:11	06:25 19:09	07:09 18:05	06:59 16:12	07:39 15:52
15	07:42 16:19	07:02 17:10	06:07 17:55	06:02 19:43	05:09 20:27	04:45 20:58	05:01 20:53	05:41 20:10	06:26 19:07	07:11 18:03	07:00 16:11	07:39 15:53
16	07:41 16:21	07:00 17:11	06:05 17:57	06:00 19:44	05:08 20:28	04:45 20:59	05:02 20:52	05:43 20:08	06:28 19:04	07:12 18:01	07:02 16:09	07:40 15:53
17	07:41 16:22	06:59 17:13	06:03 17:58	05:58 19:46	05:07 20:30	04:45 20:59	05:03 20:51	05:44 20:06	06:29 19:02	07:14 17:59	07:04 16:08	07:41 15:53
18	07:40 16:24	06:57 17:15	06:01 18:00	05:56 19:47	05:05 20:31	04:45 21:00	05:04 20:50	05:46 20:04	06:30 19:00	07:15 17:57	07:05 16:07	07:42 15:53
19	07:39 16:25	06:55 17:16	05:58 18:01	05:54 19:49	05:04 20:32	04:45 21:00	05:05 20:49	05:47 20:02	06:32 18:58	07:17 17:55	07:07 16:06	07:42 15:54
20	07:38 16:27	06:53 17:18	05:56 18:03	05:52 19:50	05:03 20:34	04:45 21:00	05:06 20:48	05:48 20:00	06:33 18:56	07:19 17:53	07:08 16:05	07:43 15:54
21	07:37 16:28	06:51 17:20	05:54 18:04	05:50 19:52	05:02 20:35	04:45 21:01	05:07 20:47	05:50 19:58	06:35 18:54	07:20 17:51	07:10 16:04	07:44 15:54
22	07:36 16:30	06:49 17:21	05:52 18:06	05:48 19:53	05:00 20:36	04:45 21:01	05:09 20:46	05:51 19:56	06:36 18:51	07:22 17:49	07:11 16:03	07:44 15:55
23	07:35 16:31	06:48 17:23	05:50 18:07	05:46 19:55	04:59 20:37	04:46 21:01	05:10 20:45	05:53 19:54	06:38 18:49	07:23 17:47	07:13 16:02	07:45 15:55
24	07:34 16:33	06:46 17:25	05:48 18:09	05:44 19:56	04:58 20:39	04:46 21:01	05:11 20:44	05:54 19:52	06:39 18:47	07:25 17:46	07:14 16:01	07:45 15:56
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26	07:32 16:36	06:42 17:28	05:44 18:12	05:40 19:59	04:56 20:41	04:46 21:01	05:14 20:41	05:57 19:49	06:42 18:43	06:28 16:42	07:17 15:59	07:46 15:57
27	07:31 16:38	06:40 17:30	05:41 18:14	05:38 20:01	04:55 20:42	04:47 21:01	05:15 20:40	05:59 19:47	06:44 18:41	06:30 16:40	07:19 15:58	07:46 15:58
28	07:29 16:40	06:38 17:31	05:39 18:15	05:37 20:02	04:54 20:43	04:47 21:01	05:16 20:39	06:00 19:44	06:45 18:39	06:31 16:38	07:20 15:58	07:46 15:59
29	07:28 16:41		06:37 19:17	05:35 20:04	04:53 20:44	04:48 21:01	05:18 20:37	06:02 19:42	06:47 18:36	06:33 16:37	07:21 15:57	07:47 15:59
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31	07:26 16:44		06:33 19:20		04:52 20:47		05:20 20:34	06:04 19:38		06:36 16:33		07:47 16:01
Potential sun hours	270	283	368	411	475	485	490	447	379	335	275	256
Total, worst case												

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:

Koncepce území zelená Haná

Licensed user:

Jipocar Power s.r.o
Stritez 3
CZ-588 11 Stritez

Quirin Müller / quirin.mueller@jipocar.cz

Calculated:

20.03.2025 8:32/4.1.273

SHADOW - Calendar

Calculation: Shadow Test Shadow receptor: C - Bojanovice #42

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

		January	February	March	April	May	June	July	August	September	October	November	December	
1	07:47		07:24	15:31 (2)	06:36	06:31	05:31	04:51	04:49	05:22	06:06	06:49	06:38	07:24
	16:02		16:46	21	15:52 (2)	17:33	19:21	20:07	20:48	21:01	20:33	19:36	18:32	16:31
2	07:47		07:23		15:33 (2)	06:34	06:29	05:30	04:50	04:50	05:23	06:07	06:51	06:39
	16:03		16:48	19	15:52 (2)	17:34	19:23	20:08	20:49	21:00	20:31	19:34	18:30	16:30
3	07:47		07:21		15:33 (2)	06:32	06:26	05:28	04:50	04:50	05:24	06:09	06:52	06:41
	16:04		16:49	18	15:51 (2)	17:36	19:24	20:10	20:50	21:00	20:30	19:32	18:28	16:28
4	07:47		07:20		15:35 (2)	06:30	06:24	05:26	04:49	04:51	05:26	06:10	06:54	06:43
	16:06		16:51	16	15:51 (2)	17:38	19:26	20:11	20:50	21:00	20:28	19:30	18:26	16:26
5	07:46		07:18		15:36 (2)	06:28	06:22	05:24	04:48	04:52	05:27	06:12	06:55	06:44
	16:07		16:53	13	15:49 (2)	17:39	19:27	20:13	20:51	20:59	20:27	19:28	18:24	16:25
6	07:46		07:17		15:39 (2)	06:26	06:20	05:23	04:48	04:52	05:29	06:13	06:57	06:46
	16:08		16:55	9	15:48 (2)	17:41	19:29	20:14	20:52	20:59	20:25	19:26	18:21	16:23
7	07:46		07:15			06:24	06:18	05:21	04:47	04:53	05:30	06:15	06:58	06:47
	16:09		16:56			17:42	19:30	20:16	20:53	20:58	20:23	19:24	18:19	16:22
8	07:46		07:14			06:22	06:16	05:20	04:47	04:54	05:31	06:16	07:00	06:49
	16:10		16:58			17:44	19:32	20:17	20:54	20:58	20:22	19:22	18:17	16:20
9	07:45		07:12			06:19	06:14	05:18	04:46	04:55	05:33	06:17	07:02	06:51
	16:11		17:00			17:46	19:33	20:18	20:55	20:57	20:20	19:19	18:15	16:19
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	16:13		17:01			17:47	19:35	20:20	20:55	20:57	20:18	19:17	18:13	16:17
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	16:14		17:03			17:49	19:36	20:21	20:56	20:56	20:17	19:15	18:11	16:16
12	07:44		07:07			06:13	06:08	05:14	04:45	04:58	05:37	06:22	07:06	06:56
	16:15		17:05			17:50	19:38	20:23	20:57	20:55	20:15	19:13	18:09	16:15
13	07:43		07:06			06:11	06:06	05:12	04:45	04:59	05:38	06:23	07:08	06:57
	16:17		17:06			17:52	19:39	20:24	20:57	20:55	20:13	19:11	18:07	16:13
14	07:43		07:04			06:09	06:04	05:11	04:45	05:00	05:40	06:25	07:09	06:59
	16:18		17:08			17:53	19:41	20:25	20:58	20:54	20:11	19:09	18:05	16:12
15	07:42		07:02			06:07	06:02	05:09	04:45	05:01	05:41	06:26	07:11	07:00
	16:19		17:10			17:55	19:42	20:27	20:58	20:53	20:10	19:07	18:03	16:11
16	07:41		07:00			06:05	06:00	05:08	04:45	05:02	05:43	06:28	07:12	07:02
	16:21		17:11			17:57	19:44	20:28	20:59	20:52	20:08	19:04	18:01	16:09
17	07:40		06:59			06:03	05:58	05:07	04:45	05:03	05:44	06:29	07:14	07:03
	16:22		17:13			17:58	19:46	20:30	20:59	20:51	20:06	19:02	17:59	16:08
18	07:40		15:36 (2)	06:57		06:01	05:56	05:05	04:45	05:04	05:46	06:30	07:15	07:05
	16:24	6	15:42 (2)	17:15		18:00	19:47	20:31	21:00	20:50	20:04	19:00	17:57	16:07
19	07:39		15:34 (2)	06:55		05:58	05:54	05:04	04:45	05:05	05:47	06:32	07:17	07:07
	16:25	11	15:45 (2)	17:16		18:01	19:49	20:32	21:00	20:49	20:02	18:58	17:55	16:06
20	07:38		15:33 (2)	06:53		05:56	05:52	05:03	04:45	05:06	05:48	06:33	07:19	07:08
	16:27	13	15:46 (2)	17:18		18:03	19:50	20:34	21:00	20:48	20:00	18:56	17:53	16:05
21	07:37		15:32 (2)	06:51		05:54	05:50	05:02	04:45	05:08	05:50	06:35	07:20	07:10
	16:28	16	15:48 (2)	17:20		18:04	19:52	20:35	21:01	20:47	19:58	18:54	17:51	16:04
22	07:36		15:31 (2)	06:49		05:52	05:48	05:00	04:45	05:09	05:51	06:36	07:22	07:11
	16:30	17	15:48 (2)	17:21		18:06	19:53	20:36	21:01	20:46	19:56	18:51	17:49	16:03
23	07:35		15:30 (2)	06:47		05:50	05:46	04:59	04:46	05:10	05:53	06:38	07:23	07:13
	16:32	19	15:49 (2)	17:23		18:07	19:55	20:37	21:01	20:45	19:54	18:49	17:47	16:02
24	07:34		15:30 (2)	06:46		05:48	05:44	04:58	04:46	05:11	05:54	06:39	07:25	07:14
	16:33	20	15:50 (2)	17:25		18:09	19:56	20:39	21:01	20:44	19:52	18:47	17:46	16:01
25	07:33		15:30 (2)	06:44		05:46	05:42	04:57	04:46	05:12	05:56	06:41	06:26	07:16
	16:35	21	15:51 (2)	17:26		18:10	19:58	20:40	21:01	20:42	19:50	18:45	16:44	16:00
26	07:32		15:31 (2)	06:42		05:43	05:40	04:56	04:47	05:14	05:57	06:42	06:28	07:17
	16:36	21	15:52 (2)	17:28		18:12	19:59	20:41	21:01	20:41	19:48	18:43	16:42	15:59
27	07:31		15:30 (2)	06:40		05:41	05:38	04:55	04:47	05:15	05:59	06:44	06:30	07:18
	16:38	22	15:52 (2)	17:29		18:14	20:01	20:42	21:01	20:40	19:46	18:41	16:40	15:58
28	07:29		15:30 (2)	06:38		05:39	05:37	04:54	04:47	05:16	06:00	06:45	06:31	07:20
	16:40	23	15:53 (2)	17:31		18:15	20:02	20:43	21:01	20:38	19:44	18:38	16:38	15:58
29	07:28		15:31 (2)			06:37	05:35	04:53	04:48	05:18	06:02	06:47	06:33	07:21
	16:41	22	15:53 (2)			19:17	20:04	20:44	21:01	20:37	19:42	18:36	16:37	15:57
30	07:27		15:31 (2)			06:35	05:33	04:53	04:48	05:19	06:03	06:48	06:35	07:23
	16:43	22	15:53 (2)			19:18	20:05	20:45	21:01	20:36	19:40	18:34	16:35	15:56
31	07:25		15:31 (2)			06:33		04:52		05:20	06:04		06:36	
	16:44	22	15:53 (2)			19:20		20:47		20:34	19:38		16:33	
Potential sun hours	270		283			368	411	475	485	490	446	379	335	275
Total, worst case	255		96										354	

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:

Koncepce území zelená Haná

Licensed user:

Jipocar Power s.r.o
Stritez 3
CZ-588 11 Stritez

Quirin Müller / quirin.mueller@jipocar.cz

Calculated:

20.03.2025 8:32/4.1.273

SHADOW - Calendar

Calculation: Shadow Test Shadow receptor: D - Zlobice #71

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

		January	February	March	April		May	June	July	August		September		October	November	December	
1	07:47 16:02	07:24 16:46	06:36 17:33	06:31 19:21			05:31 20:07	04:51 20:48	04:49 21:01	05:22 20:33		06:06 19:36	29	18:15 (2) 18:44 (2)	06:49 18:32	06:38 16:31	07:24 15:56
2	07:47 16:03	07:23 16:48	06:34 17:34	06:29 19:23			05:30 20:08	04:50 20:49	04:50 21:00	05:23 20:31		06:07 19:34	28	18:16 (2) 18:44 (2)	06:51 18:30	06:39 16:30	07:25 15:55
3	07:47 16:04	07:21 16:50	06:32 17:36	06:26 19:24			05:28 20:10	04:50 20:49	04:50 21:00	05:24 20:30		06:09 19:32	26	18:16 (2) 18:42 (2)	06:52 18:28	06:41 16:28	07:27 15:55
4	07:47 16:06	07:20 16:51	06:30 17:38	06:24 19:26	13	18:27 (2) 18:40 (2)	05:26 20:11	04:49 20:50	04:51 21:00	05:26 20:28		06:10 19:30	25	18:17 (2) 18:42 (2)	06:54 18:26	06:43 16:27	07:28 15:54
5	07:46 16:07	07:18 16:53	06:28 17:39	06:22 19:27	18	18:24 (2) 18:42 (2)	05:25 20:13	04:48 20:51	04:52 20:59	05:27 20:29		06:12 19:28	23	18:17 (2) 18:40 (2)	06:55 18:24	06:44 16:25	07:29 15:54
6	07:46 16:08	07:17 16:55	06:26 17:41	06:20 19:29	21	18:22 (2) 18:43 (2)	05:23 20:14	04:48 20:52	04:53 20:59	05:29 20:25		06:13 19:26	21	18:17 (2) 18:38 (2)	06:57 18:21	06:46 16:23	07:30 15:54
7	07:46 16:09	07:15 16:56	06:24 17:42	06:18 19:30	23	18:20 (2) 18:43 (2)	05:21 20:15	04:47 20:53	04:53 20:58	05:30 20:23		06:15 19:24	21	18:19 (2) 18:37 (2)	06:58 18:19	06:47 16:22	07:31 15:53
8	07:46 16:10	07:14 16:58	06:22 17:44	06:16 19:32	25	18:19 (2) 18:44 (2)	05:20 20:17	04:47 20:54	04:54 20:58	05:31 20:22		06:16 19:22	18	18:21 (2) 18:34 (2)	07:00 18:17	06:49 16:20	07:32 15:53
9	07:45 16:11	07:12 17:00	06:19 17:46	06:14 19:33	26	18:18 (2) 18:44 (2)	05:18 20:18	04:46 20:55	04:55 20:57	05:33 20:20		06:17 19:19	13	18:26 (2) 18:29 (2)	07:02 18:15	06:51 16:19	07:34 15:53
10	07:45 16:13	07:11 17:01	06:17 17:47	06:12 19:35	28	18:17 (2) 18:45 (2)	05:17 20:20	04:46 20:55	04:56 20:57	05:34 20:18		06:19 19:17			07:03 18:13	06:52 16:17	07:35 15:53
11	07:44 16:14	07:09 17:03	06:15 17:49	06:10 19:36	28	18:17 (2) 18:45 (2)	05:15 20:21	04:46 20:56	04:57 20:56	05:36 20:17		06:20 19:15			07:05 18:11	06:54 16:16	07:36 15:53
12	07:44 16:15	07:07 17:05	06:13 17:50	06:08 19:38	29	18:16 (2) 18:45 (2)	05:14 20:23	04:46 20:57	04:58 20:55	05:37 20:15		06:22 19:13			07:06 18:09	06:56 16:15	07:37 15:52
13	07:43 16:17	07:06 17:06	06:11 17:52	06:06 19:39	28	18:16 (2) 18:44 (2)	05:12 20:24	04:45 20:57	04:59 20:54	05:38 20:13		06:23 19:11			07:08 18:07	06:57 16:13	07:38 15:52
14	07:43 16:18	07:04 17:08	06:09 17:53	06:04 19:41	28	18:16 (2) 18:44 (2)	05:11 20:25	04:45 20:58	05:00 20:54	05:40 20:11		06:25 19:09			07:09 18:05	06:59 16:12	07:38 15:53
15	07:42 16:20	07:02 17:10	06:07 17:55	06:02 19:42	27	18:16 (2) 18:43 (2)	05:09 20:27	04:45 20:58	05:01 20:53	05:41 20:10		06:26 19:07			07:11 18:03	07:00 16:11	07:39 15:53
16	07:41 16:21	07:00 17:11	06:05 17:57	06:00 19:44	27	18:16 (2) 18:43 (2)	05:08 20:28	04:45 20:59	05:02 20:52	05:43 20:08		06:28 19:04			07:12 18:01	07:02 16:09	07:40 15:53
17	07:40 16:22	06:59 17:13	06:03 17:58	05:58 19:45	26	18:16 (2) 18:42 (2)	05:07 20:30	04:45 20:59	05:03 20:51	05:44 20:06		06:29 19:02			07:14 17:59	07:03 16:08	07:41 15:53
18	07:40 16:24	06:57 17:15	06:01 18:00	05:56 19:47	23	18:17 (2) 18:40 (2)	05:05 20:31	04:45 21:00	05:04 20:50	05:46 20:04		06:30 19:00			07:15 17:57	07:05 16:07	07:42 15:53
19	07:39 16:25	06:55 17:16	05:58 18:01	05:54 19:49	21	18:19 (2) 18:40 (2)	05:04 20:32	04:45 21:00	05:05 20:49	05:47 20:02		06:32 18:58			07:17 17:55	07:07 16:06	07:42 15:54
20	07:38 16:27	06:53 17:18	05:56 18:03	05:52 19:50	18	18:20 (2) 18:38 (2)	05:03 20:34	04:45 21:00	05:06 20:48	05:49 20:00		06:33 18:56			07:19 17:53	07:08 16:05	07:43 15:54
21	07:37 16:28	06:51 17:20	05:54 18:04	05:50 19:52	14	18:22 (2) 18:36 (2)	05:02 20:35	04:45 21:01	05:08 20:47	05:50 19:58	18:29 (2) 9	06:35 18:38 (2)			07:20 17:51	07:10 16:04	07:44 15:54
22	07:36 16:30	06:49 17:21	05:52 18:06	05:48 19:53	9	18:24 (2) 18:33 (2)	05:00 20:36	04:45 21:01	05:09 20:46	05:51 19:56	18:26 (2) 15	06:36 18:26 (2)			07:22 17:49	07:11 16:03	07:44 15:55
23	07:35 16:32	06:47 17:23	05:50 18:07	05:46 19:55			04:59 20:37	04:46 21:01	05:10 20:45	05:53 19:54	18:24 (2) 18	06:38 18:42 (2)			07:23 17:47	07:13 16:02	07:45 15:55
24	07:34 16:33	06:46 17:25	05:48 18:09	05:44 19:56			04:58 20:39	04:46 21:01	05:11 20:43	05:54 19:52	18:22 (2) 21	06:39 18:21 (2)			07:25 17:46	07:14 16:01	07:45 15:56
25	07:33 16:35	06:44 17:26	05:46 18:10	05:42 19:58			04:57 20:40	04:46 21:01	05:12 20:42	05:56 19:50	18:21 (2) 23	06:41 18:44 (2)			06:26 18:45	07:16 16:00	07:45 15:57
26	07:32 16:36	06:42 17:28	05:43 18:12	05:40 19:59			04:56 20:41	04:47 21:01	05:14 20:41	05:57 19:48	18:19 (2) 26	06:42 18:45 (2)			06:28 18:43	07:17 15:59	07:46 15:57
27	07:31 16:38	06:40 17:30	05:41 18:14	05:39 20:01			04:55 20:42	04:47 21:01	05:15 20:40	05:59 19:46	18:18 (2) 26	06:44 18:44 (2)			06:30 18:41	07:18 15:58	07:46 15:58
28	07:29 16:40	06:38 17:31	05:39 18:15	05:37 20:02			04:54 20:43	04:47 21:01	05:16 20:38	06:00 19:44	18:17 (2) 27	06:45 18:45 (2)			06:31 18:38	07:20 15:58	07:46 15:59
29	07:28 16:41		06:37 19:17	05:35 20:04			04:53 20:44	04:48 21:01	05:18 20:37	06:02 19:42	18:17 (2) 28	06:47 18:45 (2)			06:33 18:36	07:21 15:57	07:47 16:00
30	07:27 16:43		06:35 19:18	05:33 20:05			04:53 20:45	04:48 21:01	05:19 20:36	06:03 19:40	18:17 (2) 28	06:48 18:45 (2)			06:34 16:35	07:23 15:56	07:47 16:00
31	07:25 16:45		06:33 19:20				04:52 20:46		05:20 20:34	06:04 19:38	18:16 (2) 29				06:36 16:33		07:47 16:01
Potential sun hours	270	283	368	411			475	485	490	446		379	186		335	275	256
Total, worst case				432							250						

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:

Koncepce území zelená Haná

Licensed user:

Jipocar Power s.r.o
Stritez 3
CZ-588 11 Stritez

Quirin Müller / quirin.mueller@jipocar.cz

Calculated:

20.03.2025 8:32/4.1.273

SHADOW - Calendar

Calculation: Shadow Test Shadow receptor: E - Vezky #97

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December		
1	07:47 16:03	07:24 16:46	06:36 17:33	16:11 (3) 16:39 (3)	06:31 19:21	05:32 20:07	04:51 20:48	04:49 21:01	05:22 20:33	06:06 19:36	06:50 18:32	16:45 (3) 17:19 (3)	06:38 16:32	07:24 15:56
2	07:47 16:04	07:23 16:48	06:34 17:35	16:10 (3) 16:40 (3)	06:29 19:23	05:30 20:08	04:50 20:49	04:50 21:00	05:23 20:31	06:07 19:34	06:51 18:30	16:44 (3) 17:20 (3)	06:39 16:30	07:25 15:55
3	07:47 16:05	07:21 16:50	06:32 17:36	16:09 (3) 16:41 (3)	06:27 19:24	05:28 20:10	04:50 20:50	04:51 21:00	05:25 20:30	06:09 19:32	06:53 18:28	16:43 (3) 17:19 (3)	06:41 16:28	07:27 15:55
4	07:47 16:06	07:20 16:51	06:30 17:38	16:08 (3) 16:42 (3)	06:25 19:26	05:26 20:11	04:49 20:50	04:51 21:00	05:26 20:28	06:10 19:30	06:54 18:26	16:43 (3) 17:19 (3)	06:43 16:27	07:28 15:54
5	07:46 16:07	07:18 16:53	06:28 17:39	16:07 (3) 16:42 (3)	06:22 19:27	05:25 20:13	04:49 20:51	04:52 20:59	05:27 20:27	06:12 19:28	06:56 18:24	16:42 (3) 17:19 (3)	06:44 16:25	07:29 15:54
6	07:46 16:08	07:17 16:55	06:26 17:41	16:07 (3) 16:43 (3)	06:20 19:29	05:23 20:14	04:48 20:52	04:53 20:59	05:29 20:25	06:13 19:26	06:57 18:22	16:42 (3) 17:19 (3)	06:46 16:24	07:30 15:54
7	07:46 16:09	07:15 16:56	06:24 17:43	16:06 (3) 16:42 (3)	06:18 19:30	05:21 20:16	04:48 20:53	04:54 20:58	05:30 20:23	06:15 19:24	06:59 18:20	16:42 (3) 17:18 (3)	06:48 16:22	07:31 15:53
8	07:46 16:10	07:14 16:58	06:22 17:44	16:05 (3) 16:42 (3)	06:16 19:32	05:20 20:17	04:47 20:54	04:54 20:58	05:32 20:22	06:16 19:22	07:00 18:17	16:42 (3) 17:17 (3)	06:49 16:21	07:33 15:53
9	07:45 16:12	07:12 17:00	06:20 17:46	16:05 (3) 16:42 (3)	06:14 19:33	05:18 20:18	04:47 20:55	04:55 20:57	05:33 20:20	06:18 19:20	07:02 18:15	16:43 (3) 17:17 (3)	06:51 16:19	07:34 15:53
10	07:45 16:13	07:11 17:01	06:18 17:47	16:05 (3) 16:41 (3)	06:12 19:35	05:17 20:20	04:46 20:55	04:56 20:57	05:34 20:18	06:19 19:17	07:03 18:13	16:43 (3) 17:16 (3)	06:52 16:18	07:35 15:53
11	07:44 16:14	07:09 17:03	06:15 17:49	16:05 (3) 16:41 (3)	06:10 19:36	05:15 20:21	04:46 20:56	04:57 20:56	05:36 20:17	06:20 19:15	07:05 18:11	16:43 (3) 17:15 (3)	06:54 16:16	07:36 15:53
12	07:44 16:16	07:07 17:05	06:13 17:50	16:06 (3) 16:40 (3)	06:08 19:38	05:14 20:23	04:46 20:57	04:58 20:55	05:37 20:15	06:22 19:13	07:06 18:09	16:44 (3) 17:13 (3)	06:56 16:15	07:37 15:53
13	07:43 16:17	07:06 17:06	06:11 17:52	16:06 (3) 16:40 (3)	06:06 19:40	05:12 20:24	04:46 20:57	04:59 20:55	05:39 20:13	06:23 19:11	07:08 18:07	16:45 (3) 17:12 (3)	06:57 16:13	07:38 15:53
14	07:43 16:18	07:04 17:08	06:09 17:54	16:07 (3) 16:39 (3)	06:04 19:41	05:11 20:26	04:45 20:58	05:00 20:54	05:40 20:11	06:25 19:09	07:09 18:05	16:46 (3) 17:10 (3)	06:59 16:12	07:39 15:53
15	07:42 16:20	07:02 17:10	06:07 17:55	16:08 (3) 16:38 (3)	06:02 19:43	05:09 20:27	04:45 20:58	05:01 20:53	05:41 20:10	06:26 19:07	07:11 18:03	16:48 (3) 17:08 (3)	07:00 16:11	07:39 15:53
16	07:41 16:21	07:00 17:12	06:05 17:57	16:08 (3) 16:35 (3)	06:00 19:44	05:08 20:28	04:45 20:59	05:02 20:52	05:43 20:08	06:28 19:04	07:12 18:01	16:51 (3) 17:05 (3)	07:02 16:10	07:40 15:53
17	07:41 16:23	06:59 17:13	06:03 17:58	16:10 (3) 16:34 (3)	05:58 19:46	05:07 20:30	04:45 20:59	05:03 20:51	05:44 20:06	06:29 19:02	07:14 17:59	16:59 (3) 17:11 (3)	07:04 16:08	07:41 15:53
18	07:40 16:24	06:57 17:15	06:01 18:00	16:12 (3) 16:32 (3)	05:56 19:47	05:05 20:31	04:45 21:00	05:04 20:50	05:46 20:04	06:31 19:00	07:15 17:57	16:55 (3) 17:14 (3)	07:05 16:07	07:42 15:53
19	07:39 16:26	06:55 17:17	05:59 18:01	16:14 (3) 16:29 (3)	05:54 19:49	05:04 20:32	04:45 21:00	05:05 20:49	05:47 20:02	06:32 18:58	07:17 17:55	16:59 (3) 17:18 (3)	07:07 16:06	07:42 15:54
20	07:38 16:27	06:53 17:18	05:56 18:03	16:15 (3) 19:50	05:52 20:34	05:03 21:00	04:45 20:48	05:07 20:00	05:49 18:56	06:33 17:53	07:19 17:53	16:59 (3) 17:18 (3)	07:08 16:05	07:43 15:54
21	07:37 16:29	06:51 17:20	05:54 18:04	16:16 (3) 19:52	05:50 20:35	05:02 21:01	04:45 20:47	05:08 19:58	05:50 18:54	06:35 17:51	07:20 17:51	16:59 (3) 17:19 (3)	07:10 16:04	07:44 15:55
22	07:36 16:30	06:49 17:21	05:52 18:06	16:17 (3) 19:53	05:48 20:36	05:01 21:01	04:46 20:46	05:09 19:56	05:52 18:52	06:36 17:50	07:22 17:50	16:59 (3) 17:19 (3)	07:11 16:03	07:44 15:55
23	07:35 16:32	06:48 17:23	05:50 18:08	16:18 (3) 19:55	05:46 20:37	05:00 21:01	04:46 20:45	05:10 19:54	05:53 18:49	06:38 17:48	07:23 17:48	16:59 (3) 17:19 (3)	07:13 16:02	07:45 15:56
24	07:34 16:33	06:46 17:25	05:48 18:09	16:19 (3) 19:56	05:44 20:39	04:58 21:01	04:46 20:44	05:11 19:52	05:54 18:47	06:39 17:46	07:24 17:46	16:59 (3) 17:19 (3)	07:14 16:01	07:46 15:56
25	07:33 16:35	06:44 17:26	05:46 18:11	16:20 (3) 19:58	05:42 20:40	04:57 21:01	04:46 20:42	05:13 19:51	05:56 18:45	06:41 17:44	07:25 17:44	16:59 (3) 17:19 (3)	07:15 16:00	07:47 15:57
26	07:32 16:37	06:42 17:28	05:44 18:12	16:17 (3) 19:59	05:44 20:41	04:56 21:01	04:47 20:41	05:14 19:49	05:57 18:43	06:42 17:43	07:26 17:43	16:53 (3) 17:16 (3)	06:28 16:42	07:17 15:57
27	07:31 16:38	06:40 17:30	05:41 18:14	16:15 (3) 20:01	05:41 20:42	04:55 21:01	04:47 20:40	05:15 19:47	05:59 18:41	06:44 17:43	07:27 17:43	16:53 (3) 17:17 (3)	06:30 16:40	07:19 15:58
28	07:29 16:40	06:38 17:31	05:39 18:15	16:13 (3) 20:02	05:37 20:43	04:54 21:01	04:48 20:38	05:17 19:45	06:00 18:39	06:45 17:43	07:28 17:43	16:49 (3) 17:18 (3)	06:30 16:39	07:20 15:59
29	07:28 16:41	06:37 17:32	05:37 18:16	16:13 (3) 19:17	05:35 20:04	04:54 21:01	04:48 20:37	05:18 19:42	06:02 18:36	06:47 17:43	07:29 17:43	16:47 (3) 17:18 (3)	06:33 16:37	07:21 15:57
30	07:27 16:43	06:36 17:33	05:35 18:17	16:14 (3) 19:18	05:33 20:05	04:53 21:01	04:49 20:36	05:19 19:40	06:03 18:34	06:48 17:43	07:30 17:43	16:46 (3) 17:19 (3)	06:35 16:35	07:23 15:57
31	07:26 16:45	06:35 17:34	05:33 18:18	16:15 (3) 19:20	05:33 20:05	04:53 21:01	04:49 20:36	05:20 19:38	06:05 18:34	06:49 17:43	07:31 17:43	16:47 (3) 17:19 (3)	06:35 16:35	07:24 15:57
Potential sun hours	270	283	368	411	474	485	489	446	379	174	500	275	257	
Total, worst case		71	594											

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

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

SHADOW - Calendar

Calculation: Shadow Test Shadow receptor: F - Vlcí Doly #10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December	
1	07:47 16:03	07:24 16:46	06:36 17:33	06:31 19:21	05:32 20:07	04:51 20:48	04:49 21:01	05:22 20:33	06:06 19:36	06:50 18:32	06:38 16:32	07:24 15:56	
2	07:47 16:04	07:23 16:48	06:34 17:35	06:29 19:23	05:30 20:08	04:51 20:49	04:50 21:00	05:23 20:31	06:08 19:34	06:51 18:30	06:40 16:30	07:25 15:55	
3	07:47 16:05	07:21 16:50	06:32 17:36	06:27 19:24	05:28 20:10	04:50 20:50	04:51 21:00	05:25 20:30	06:09 19:32	06:53 18:28	06:41 16:28	07:27 15:55	
4	07:47 16:06	07:20 16:51	06:30 17:38	06:25 19:26	05:26 20:11	04:49 20:51	04:51 21:00	05:26 20:28	06:10 19:30	06:54 18:26	06:43 16:27	07:28 15:55	
5	07:47 16:07	07:19 16:53	06:28 17:39	06:22 19:27	05:25 20:13	04:49 20:51	04:52 20:59	05:27 20:27	06:12 19:28	06:56 18:24	06:44 16:25	07:29 15:54	
6	07:46 16:08	07:17 16:55	06:26 17:41	06:20 19:29	05:23 20:14	04:48 20:52	04:53 20:59	05:29 20:25	06:13 19:26	06:57 18:22	06:46 16:24	07:30 15:54	
7	07:46 16:09	07:16 16:56	06:24 17:43	06:18 19:30	05:21 20:16	04:48 20:53	04:54 20:58	05:30 20:24	06:15 19:24	06:59 18:20	06:48 16:22	07:32 15:53	
8	07:46 16:10	07:14 16:58	06:22 17:44	06:16 19:32	05:20 20:17	04:47 20:54	04:54 20:58	05:32 20:22	06:16 19:22	07:00 18:18	06:49 16:21	07:33 15:53	
9	07:45 16:12	07:12 17:00	06:20 17:46	06:14 19:34	05:18 20:19	04:47 20:55	04:55 20:57	05:33 20:20	06:18 19:20	07:02 18:15	06:51 16:19	07:34 15:53	
10	07:45 16:13	07:11 17:02	06:18 17:47	06:12 19:35	05:17 20:20	04:46 20:55	04:56 20:57	05:34 20:19	06:19 19:17	07:03 18:13	06:52 16:18	07:35 15:53	
11	07:44 16:14	07:09 17:03	06:15 17:49	06:10 19:37	05:15 20:21	04:46 20:56	04:57 20:56	05:36 20:17	06:21 19:15	07:05 18:11	06:54 16:16	07:36 15:53	
12	07:44 16:16	07:07 17:05	06:13 17:51	06:08 19:38	05:14 20:23	04:46 20:57	04:58 20:55	05:37 20:15	06:22 19:13	07:06 18:09	06:56 16:15	07:37 15:53	
13	07:43 16:17	07:06 17:07	06:11 17:52	06:06 19:40	05:12 20:24	04:46 20:57	04:59 20:55	05:39 20:13	06:23 19:11	07:08 18:07	06:57 16:14	07:38 15:53	
14	07:43 16:18	07:04 17:08	06:09 17:54	06:04 19:41	05:11 20:26	04:45 20:58	05:00 20:54	05:40 20:11	06:25 19:09	07:09 18:05	06:59 16:12	07:39 15:53	10:35 (3)
15	07:42 16:20	07:02 17:10	06:07 17:55	06:02 19:43	05:10 20:27	04:45 20:58	05:01 20:53	05:42 20:10	06:26 19:07	07:11 18:03	07:00 16:11	07:39 15:53	5 10:40 (3)
16	07:41 16:21	07:01 17:12	06:05 17:57	06:00 19:44	05:08 20:28	04:45 20:59	05:02 20:52	05:43 20:08	06:28 19:05	07:12 18:01	07:02 16:10	07:40 15:53	9 10:43 (3)
17	07:41 16:23	06:59 17:13	06:03 17:58	05:58 19:46	05:07 20:30	04:45 20:59	05:03 20:51	05:44 20:06	06:29 19:02	07:14 17:59	07:04 16:08	07:41 15:53	10 10:44 (3)
18	07:40 16:24	06:57 17:15	06:01 18:00	05:56 19:47	05:06 20:31	04:45 21:00	05:04 20:50	05:46 20:04	06:31 19:00	07:16 17:57	07:05 16:07	07:42 15:54	12 10:46 (3)
19	07:39 16:26	06:55 17:17	05:59 18:01	05:54 19:49	05:04 20:32	04:45 21:00	05:05 20:49	05:47 20:02	06:32 18:58	07:17 17:55	07:07 16:06	07:42 15:54	13 10:46 (3)
20	07:38 16:27	06:53 17:18	05:56 18:03	05:52 19:50	05:03 20:34	04:45 21:00	05:07 20:48	05:49 20:00	06:34 18:56	07:19 17:53	07:08 16:05	07:43 15:54	13 10:47 (3)
21	07:37 16:29	06:51 17:20	05:54 18:05	05:50 19:52	05:02 20:35	04:45 21:01	05:08 20:47	05:50 19:58	06:35 18:54	07:20 17:51	07:10 16:04	07:44 15:55	14 10:34 (3)
22	07:36 16:30	06:50 17:22	05:52 18:06	05:48 19:53	05:01 20:36	04:46 21:01	05:09 20:46	05:52 19:56	06:36 18:52	07:22 17:50	07:11 16:03	07:44 15:55	14 10:48 (3)
23	07:35 16:32	06:48 17:23	05:50 18:08	05:46 19:55	05:00 20:37	04:46 21:01	05:10 20:45	05:53 19:55	06:38 18:49	07:23 17:48	07:13 16:02	07:45 15:56	14 10:49 (3)
24	07:34 16:33	06:46 17:25	05:48 18:09	05:44 19:56	05:44 20:39	04:46 21:01	05:11 20:44	05:55 19:53	06:39 18:47	07:25 17:46	07:14 16:01	07:45 15:56	13 10:49 (3)
25	07:33 16:35	06:44 17:26	05:46 18:11	05:42 19:58	05:42 20:40	04:46 21:01	05:13 20:42	05:56 19:51	06:41 18:45	06:27 16:44	07:16 16:00	07:46 15:57	13 10:37 (3)
26	07:32 16:37	06:42 17:28	05:44 18:12	05:41 19:59	05:41 20:41	04:47 21:01	05:14 20:41	05:57 19:49	06:42 18:43	06:28 16:42	07:17 16:00	07:46 15:57	12 10:50 (3)
27	07:31 16:38	06:40 17:30	05:42 18:14	05:39 20:01	05:39 20:42	04:47 21:01	05:15 20:40	05:59 19:47	06:44 18:41	06:30 16:40	07:19 15:59	07:46 15:58	12 10:39 (3)
28	07:29 16:40	06:38 17:31	05:39 18:15	05:37 20:02	05:37 20:43	04:48 21:01	05:17 20:39	06:00 19:45	06:45 18:39	06:31 16:39	07:20 15:58	07:46 15:59	10 10:40 (3)
29	07:28 16:41		06:37 19:17	05:35 20:04	05:35 20:44	04:48 21:01	05:18 20:37	06:02 19:43	06:47 18:37	06:33 16:37	07:21 15:57	07:47 16:00	7 10:41 (3)
30	07:27 16:43		06:35 19:18	05:33 20:05	05:33 20:46	04:49 21:01	05:19 20:36	06:03 19:41	06:48 18:34	06:35 16:35	07:23 15:57	07:47 16:01	
31	07:26 16:45		06:33 19:20		04:52 20:47		05:21 20:34	06:05 19:38		06:36 16:33		07:47 16:01	
Potential sun hours	270	283	368	411	474	485	489	446	379	335	275	257	
Total, worst case													182

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:

Koncepcie území zelená Haná

Licensed user:

Jipocar Power s.r.o
Stritez 3
CZ-588 11 Stritez

Quirin Müller / quirin.mueller@jipocar.cz

Calculated:

20.03.2025 8:32/4.1.273

SHADOW - Calendar

Calculation: Shadow Test Shadow receptor: G - Tetetice #72

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:47	07:24	06:36	06:31	05:32	04:51	04:49	05:22	06:06	06:50	06:38	07:24
	16:03	16:46	17:33	19:21	20:07	20:48	21:01	20:33	19:36	18:32	16:32	15:56
2	07:47	07:23	06:34	06:29	05:30	04:51	04:50	05:23	06:08	06:51	06:40	07:25
	16:04	16:48	17:35	19:23	20:08	20:49	21:00	20:31	19:34	18:30	16:30	15:56
3	07:47	07:21	06:32	06:27	05:28	04:50	04:51	05:25	06:09	06:53	06:41	07:27
	16:05	16:50	17:36	19:24	20:10	20:50	21:00	20:30	19:32	18:28	16:28	15:55
4	07:47	07:20	06:30	06:25	05:27	04:49	04:51	05:26	06:10	06:54	06:43	07:28
	16:06	16:52	17:38	19:26	20:11	20:51	21:00	20:28	19:30	18:26	16:27	15:55
5	07:47	07:19	06:28	06:23	05:25	04:49	04:52	05:27	06:12	06:56	06:44	07:29
	16:07	16:53	17:39	19:27	20:13	20:51	20:59	20:27	19:28	18:24	16:25	15:54
6	07:46	07:17	06:26	06:20	05:23	04:48	04:53	05:29	06:13	06:57	06:46	07:30
	16:08	16:55	17:41	19:29	20:14	20:52	20:59	20:25	19:26	18:22	16:24	15:54
7	07:46	07:15	06:24	06:18	05:22	04:48	04:54	05:30	06:15	06:59	06:48	07:31
	16:09	16:57	17:43	19:30	20:16	20:53	20:58	20:24	19:24	18:20	16:22	15:54
8	07:46	07:14	06:22	06:16	05:20	04:47	04:55	05:32	06:16	07:00	06:49	07:33
	16:11	16:58	17:44	19:32	20:17	20:54	20:58	20:22	19:22	18:18	16:21	15:53
9	07:45	07:12	06:20	06:14	05:18	04:47	04:55	05:33	06:18	07:02	06:51	07:34
	16:12	17:00	17:46	19:34	20:19	20:55	20:57	20:20	19:20	18:15	16:19	15:53
10	07:45	07:11	06:18	06:12	05:17	04:47	04:56	05:34	06:19	07:03	06:52	07:35
	16:13	17:02	17:47	19:35	20:20	20:55	20:57	20:19	19:17	18:13	16:18	15:53
11	07:44	07:09	06:16	06:10	05:15	04:46	04:57	05:36	06:21	07:05	06:54	07:36
	16:14	17:03	17:49	19:37	20:21	20:56	20:56	20:17	19:15	18:11	16:16	15:53
12	07:44	07:07	06:13	06:08	05:14	04:46	04:58	05:37	06:22	07:06	06:56	07:37
	16:16	17:05	17:51	19:38	20:23	20:57	20:55	20:15	19:13	18:09	16:15	15:53
13	07:43	07:06	06:11	06:06	05:12	04:46	04:59	05:39	06:23	07:08	06:57	07:38
	16:17	17:07	17:52	19:40	20:24	20:57	20:55	20:13	19:11	18:07	16:14	15:53
14	07:43	07:04	06:09	06:04	05:11	04:46	05:00	05:40	06:25	07:09	06:59	07:39
	16:18	17:08	17:54	19:41	20:26	20:58	20:54	20:11	19:09	18:05	16:12	15:53
15	07:42	07:02	06:07	06:02	05:10	04:45	05:01	05:42	06:26	07:11	07:00	07:39
	16:20	17:10	17:55	19:43	20:27	20:58	20:53	20:10	19:07	18:03	16:11	15:53
16	07:41	07:01	06:05	06:00	05:08	04:45	05:02	05:43	06:28	07:12	07:02	07:40
	16:21	17:12	17:57	19:44	20:28	20:59	20:52	20:08	19:05	18:01	16:10	15:53
17	07:41	06:59	06:03	05:58	05:07	04:45	05:03	05:44	06:29	07:14	07:04	07:41
	16:23	17:13	17:58	19:46	20:30	20:59	20:51	20:06	19:02	17:59	16:09	15:53
18	07:40	06:57	06:01	05:56	05:06	04:45	05:04	05:46	06:31	07:16	07:05	07:42
	16:24	17:15	18:00	19:47	20:31	21:00	20:50	20:04	19:00	17:57	16:07	15:54
19	07:39	06:55	05:59	05:54	05:04	04:45	05:06	05:47	06:32	07:17	07:07	07:42
	16:26	17:17	18:01	19:49	20:32	21:00	20:49	20:02	18:58	17:55	16:06	15:54
20	07:38	06:53	05:57	05:52	05:03	04:45	05:07	05:49	06:34	07:19	07:08	07:43
	16:27	17:18	18:03	19:50	20:34	21:00	20:48	20:00	18:56	17:53	16:05	15:54
21	07:37	06:51	05:54	05:50	05:02	04:46	05:08	05:50	06:35	07:20	07:10	07:44
	16:29	17:20	18:05	19:52	20:35	21:01	20:47	19:58	18:54	17:52	16:04	15:55
22	07:36	06:50	05:52	05:48	05:01	04:46	05:09	05:52	06:36	07:22	07:11	07:44
	16:30	17:22	18:06	19:53	20:36	21:01	20:46	19:56	18:52	17:50	16:03	15:55
23	07:35	06:48	05:50	05:46	05:00	04:46	05:10	05:53	06:38	07:23	07:13	07:45
	16:32	17:23	18:08	19:55	20:37	21:01	20:45	19:55	18:49	17:48	16:02	15:56
24	07:34	06:46	05:48	05:44	04:59	04:46	05:12	05:55	06:39	07:25	07:14	07:45
	16:33	17:25	18:09	19:56	20:39	21:01	20:44	19:53	18:47	17:46	16:01	15:56
25	07:33	06:44	05:46	05:43	04:58	04:47	05:13	05:56	06:41	06:27	07:16	07:46
	16:35	17:27	18:11	19:58	20:40	21:01	20:42	19:51	18:45	16:44	16:00	15:57
26	07:32	06:42	05:44	05:41	04:57	04:47	05:14	05:57	06:42	06:28	07:17	07:46
	16:37	17:28	18:12	19:59	20:41	21:01	20:41	19:49	18:43	16:42	16:00	15:58
27	07:31	06:40	05:42	05:39	04:56	04:47	05:15	05:59	06:44	06:30	07:19	07:46
	16:38	17:30	18:14	20:01	20:42	21:01	20:40	19:47	18:41	16:40	15:59	15:58
28	07:29	06:38	05:39	05:37	04:55	04:48	05:17	06:00	06:45	06:31	07:20	07:46
	16:40	17:31	18:15	20:02	20:43	21:01	20:38	19:45	18:39	16:39	15:58	15:59
29	07:28		06:37	05:35	04:54	04:48	05:18	06:02	06:47	06:33	07:21	07:47
	16:42		19:17	20:04	20:44	21:01	20:37	19:43	18:37	16:37	15:57	16:00
30	07:27		06:35	05:33	04:53	04:49	05:19	06:03	06:48	06:35	07:23	07:47
	16:43		19:18	20:05	20:46	21:01	20:36	19:41	18:34	16:35	15:57	16:01
31	07:26		06:33		04:52		05:21	06:05		06:36		07:47
	16:45		19:20		20:47		20:34	19:38		16:33		16:02
Potential sun hours	270	283	368	411	474	485	489	446	379	335	275	257
Total, worst case												

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:

Koncepce území zelená Haná

Licensed user:

Jipocar Power s.r.o
Stritez 3
CZ-588 11 Stritez

Quirin Müller / quirin.mueller@jipocar.cz

Calculated:

20.03.2025 8:32/4.1.273

SHADOW - Calendar

Calculation: Shadow Test Shadow receptor: H - Bezmerov #220

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December	
1	07:47 16:02	07:24 16:46	15:54 (1) 16:13 (1)	06:36 17:33	06:31 19:21	05:31 20:07	04:51 20:48	04:49 21:01	05:21 20:33	06:06 19:36	06:49 18:32	15:28 (1) 15:42 (1)	07:24 15:56
2	07:47 16:03	07:23 16:48	15:54 (1) 16:14 (1)	06:34 17:34	06:28 19:23	05:29 20:08	04:50 20:49	04:49 21:00	05:23 20:31	06:07 19:34	06:51 18:30	15:26 (1) 15:42 (1)	07:25 15:55
3	07:47 16:04	07:21 16:49	15:54 (1) 16:14 (1)	06:32 17:36	06:26 19:24	05:28 20:10	04:49 20:50	04:50 21:00	05:24 20:30	06:09 19:32	06:52 18:28	15:25 (1) 15:43 (1)	07:27 15:55
4	07:47 16:05	07:20 16:51	15:54 (1) 16:15 (1)	06:30 17:37	06:24 19:26	05:26 20:11	04:49 20:50	04:51 21:00	05:26 20:28	06:10 19:30	06:54 18:26	15:25 (1) 15:44 (1)	07:28 15:54
5	07:46 16:06	07:18 16:53	15:54 (1) 16:15 (1)	06:28 17:39	06:22 19:27	05:24 20:13	04:48 20:51	04:52 20:59	05:27 20:27	06:12 19:28	06:55 18:23	15:25 (1) 15:45 (1)	07:29 15:54
6	07:46 16:08	07:17 16:54	15:55 (1) 16:15 (1)	06:26 17:41	06:20 19:29	05:23 20:14	04:48 20:52	04:52 20:59	05:28 20:25	06:13 19:26	06:57 18:21	15:24 (1) 15:44 (1)	07:30 15:53
7	07:46 16:09	07:15 16:56	15:55 (1) 16:14 (1)	06:24 17:42	06:18 19:30	05:21 20:15	04:47 20:53	04:53 20:58	05:30 20:23	06:14 19:24	06:58 18:19	15:24 (1) 15:45 (1)	07:31 15:53
8	07:46 16:10	07:14 16:58	15:56 (1) 16:14 (1)	06:21 17:44	06:16 19:32	05:20 20:17	04:47 20:54	04:54 20:58	05:31 20:22	06:16 19:21	07:00 18:17	15:24 (1) 15:45 (1)	07:33 15:53
9	07:45 16:11	07:12 16:59	15:57 (1) 16:13 (1)	06:19 17:45	06:14 19:33	05:18 20:18	04:46 20:55	04:55 20:57	05:33 20:20	06:17 19:19	07:01 18:15	15:25 (1) 15:45 (1)	07:34 15:53
10	07:45 16:13	07:11 17:01	15:58 (1) 16:12 (1)	06:17 17:47	06:12 19:35	05:16 20:20	04:46 20:55	04:56 20:57	05:34 20:18	06:19 19:17	07:03 18:13	15:25 (1) 15:44 (1)	07:35 15:52
11	07:44 16:14	07:09 17:03	16:00 (1) 16:10 (1)	06:15 17:49	06:10 19:36	05:15 20:21	04:46 20:56	04:57 20:56	05:35 20:17	06:20 19:15	07:05 18:11	15:26 (1) 15:44 (1)	07:36 15:52
12	07:44 16:15	07:07 17:05	06:13 17:50	06:08 19:38	05:13 20:23	04:45 20:57	04:58 20:55	05:37 20:15	06:22 19:13	07:06 18:09	07:06 17:04	15:27 (1) 15:44 (1)	07:37 15:52
13	07:43 16:17	07:06 17:06	06:11 17:52	06:06 19:39	05:12 20:24	04:45 20:57	04:59 20:55	05:38 20:13	06:23 19:11	07:08 18:07	07:08 16:13	15:28 (1) 15:43 (1)	07:38 15:52
14	07:43 16:18	07:04 17:08	06:09 17:53	06:04 19:41	05:11 20:25	04:45 20:58	05:00 20:54	05:40 20:11	06:25 19:09	07:09 18:05	07:09 16:12	15:29 (1) 15:41 (1)	07:39 15:52
15	07:42 16:19	07:02 17:10	06:07 17:55	06:02 19:42	05:09 20:27	04:45 20:58	05:01 20:53	05:41 20:10	06:26 19:06	07:11 18:03	07:11 16:11	15:31 (1) 15:40 (1)	07:39 15:52
16	07:41 16:21	07:00 17:11	06:05 17:56	06:00 19:44	05:08 20:28	04:45 20:59	05:02 20:52	05:43 20:08	06:27 19:04	07:12 18:01	07:12 16:09		07:40 15:53
17	07:40 16:22	06:59 17:13	06:03 17:58	05:58 19:45	05:06 20:30	04:45 20:59	05:03 20:51	05:44 20:06	06:29 19:02	07:14 17:59	07:14 16:08		07:41 15:53
18	07:40 16:24	06:57 17:15	06:00 18:00	05:56 19:47	05:05 20:31	04:45 21:00	05:04 20:50	05:45 20:04	06:30 19:00	07:15 17:57	07:15 16:07		07:42 15:53
19	07:39 16:25	06:55 17:16	05:58 18:01	05:54 19:48	05:04 20:32	04:45 21:00	05:05 20:49	05:47 20:02	06:32 18:58	07:17 17:55	07:17 16:06		07:42 15:53
20	07:38 16:27	06:53 17:18	05:56 18:03	05:52 19:50	05:03 20:34	04:45 21:00	05:06 20:48	05:48 20:00	06:33 18:56	07:18 17:53	07:18 16:05		07:43 15:54
21	07:37 16:28	06:51 17:20	05:54 18:04	05:50 19:52	05:01 20:35	04:45 21:01	05:07 20:47	05:50 19:58	06:35 18:53	07:20 17:51	07:20 16:04		07:44 15:54
22	07:36 16:30	06:49 17:21	05:52 18:06	05:48 19:53	05:00 20:36	04:45 21:01	05:09 20:46	05:51 19:56	06:36 18:51	07:22 17:49	07:22 16:03		07:44 15:55
23	07:35 16:31	06:47 17:23	05:50 18:07	05:46 19:55	04:59 20:37	04:45 21:01	05:05 20:45	05:47 19:54	06:32 18:49	07:17 17:47	07:17 16:02		07:45 15:55
24	07:34 16:33	06:45 17:24	05:48 18:09	05:44 19:56	04:58 20:39	04:46 21:01	05:11 20:44	05:54 19:52	06:39 18:47	07:25 17:45	07:25 16:01		07:45 15:56
25	07:33 16:35	06:44 17:26	05:46 18:10	05:42 19:58	04:57 20:40	04:46 21:01	05:12 20:42	05:56 19:50	06:41 18:45	06:26 16:44	06:26 16:00		07:45 15:56
26	07:32 16:36	06:42 17:28	05:43 18:12	05:40 19:59	04:56 20:41	04:46 21:01	05:14 20:41	05:57 19:48	06:42 18:43	06:28 16:42	06:28 15:59		07:46 15:57
27	07:31 16:38	15:58 (1) 16:07 (1)	06:40 17:29	05:41 18:13	05:38 20:01	04:55 20:42	04:47 21:01	05:15 19:46	05:58 18:41	06:43 16:40	06:30 15:58		07:46 15:58
28	07:29 16:39	15:57 (1) 16:09 (1)	06:38 17:31	05:39 18:15	05:37 20:02	04:54 20:43	04:47 21:01	05:16 20:38	06:00 19:44	06:45 18:38	06:31 16:38		07:46 15:59
29	07:28 16:41	15:56 (1) 16:11 (1)		06:37 19:17	05:35 20:04	04:53 20:44	04:48 21:01	05:17 19:42	06:01 18:36	06:46 16:36	06:33 15:57		07:47 15:59
30	07:27 16:43	15:55 (1) 16:12 (1)		06:35 19:18	05:33 20:05	04:52 20:45	04:48 21:01	05:19 20:36	06:03 19:40	06:48 18:34	06:34 16:35	15:33 (1) 15:40 (1)	07:23 15:56
31	07:25 16:44	15:55 (1) 16:13 (1)		06:33 19:20		04:52 20:47		05:20 20:34	06:04 19:38		06:36 16:33	15:29 (1) 15:40 (1)	07:47 16:01
Potential sun hours	270	283	368	411	475	485	490	447	379	335	14	275	256
Total, worst case	71	198									259		

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:

Koncepce území zelená Haná

Licensed user:

Jipocar Power s.r.o
Stritez 3
CZ-588 11 Stritez

Quirin Müller / quirin.mueller@jipocar.cz

Calculated:

20.03.2025 8:32/4.1.273

SHADOW - Calendar

Calculation: Shadow Test Shadow receptor: I - Bojanovice #44

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January		February		March	April	May	June	July	August	September	October	November	December	
1	07:47		07:24	15:43 (2)	06:36	06:31	05:31	04:51	04:49	05:22	06:06	06:49	06:38	15:13 (2)	07:24
	16:02		16:46	19 16:02 (2)	17:33	19:21	20:07	20:48	21:01	20:33	19:36	18:32	16:31	21 15:34 (2)	15:56
2	07:47		07:23	15:43 (2)	06:34	06:29	05:30	04:50	04:50	05:23	06:07	06:51	06:39	15:12 (2)	07:25
	16:03		16:48	21 16:04 (2)	17:34	19:23	20:08	20:49	21:00	20:31	19:34	18:30	16:30	22 15:34 (2)	15:55
3	07:47		07:21	15:42 (2)	06:32	06:26	05:28	04:50	04:50	05:24	06:09	06:52	06:41	15:12 (2)	07:27
	16:04		16:49	22 16:04 (2)	17:36	19:24	20:10	20:50	21:00	20:30	19:32	18:28	16:28	23 15:35 (2)	15:55
4	07:47		07:20	15:42 (2)	06:30	06:24	05:26	04:49	04:51	05:26	06:10	06:54	06:43	15:12 (2)	07:28
	16:06		16:51	23 16:05 (2)	17:38	19:26	20:11	20:50	21:00	20:28	19:30	18:26	16:26	23 15:35 (2)	15:54
5	07:46		07:18	15:42 (2)	06:28	06:22	05:25	04:48	04:52	05:27	06:12	06:55	06:44	15:12 (2)	07:29
	16:07		16:53	23 16:05 (2)	17:39	19:27	20:13	20:51	20:59	20:27	19:28	18:24	16:25	23 15:35 (2)	15:54
6	07:46		07:17	15:42 (2)	06:26	06:20	05:23	04:48	04:52	05:29	06:13	06:57	06:46	15:12 (2)	07:30
	16:08		16:55	24 16:06 (2)	17:41	19:29	20:14	20:52	20:59	20:25	19:26	18:21	16:23	23 15:35 (2)	15:53
7	07:46		07:15	15:42 (2)	06:24	06:18	05:21	04:47	04:53	05:30	06:15	06:58	06:47	15:12 (2)	07:31
	16:09		16:56	23 16:05 (2)	17:42	19:30	20:16	20:53	20:58	20:23	19:24	18:19	16:22	23 15:35 (2)	15:53
8	07:46		07:14	15:42 (2)	06:22	06:16	05:20	04:47	04:54	05:31	06:16	07:00	06:49	15:13 (2)	07:33
	16:10		16:58	23 16:05 (2)	17:44	19:32	20:17	20:54	20:58	20:22	19:22	18:17	16:20	22 15:35 (2)	15:53
9	07:45		07:12	15:43 (2)	06:19	06:14	05:18	04:46	04:55	05:33	06:17	07:02	06:51	15:14 (2)	07:34
	16:11		17:00	22 16:05 (2)	17:46	19:33	20:18	20:55	20:57	20:20	19:19	18:15	16:19	20 15:34 (2)	15:53
10	07:45		07:11	15:44 (2)	06:17	06:12	05:17	04:46	04:56	05:34	06:19	07:03	06:52	15:14 (2)	07:35
	16:13		17:01	21 16:05 (2)	17:47	19:35	20:20	20:55	20:57	20:18	19:17	18:13	16:17	19 15:33 (2)	15:53
11	07:44		07:09	15:44 (2)	06:15	06:10	05:15	04:46	04:57	05:36	06:20	07:05	06:54	15:15 (2)	07:36
	16:14		17:03	20 16:04 (2)	17:49	19:36	20:21	20:56	20:56	20:17	19:15	18:11	16:16	17 15:32 (2)	15:52
12	07:44		07:07	15:45 (2)	06:13	06:08	05:14	04:46	04:58	05:37	06:22	07:06	06:56	15:17 (2)	07:37
	16:15		17:05	18 16:03 (2)	17:50	19:38	20:23	20:57	20:55	20:15	19:13	18:09	16:15	14 15:31 (2)	15:52
13	07:43		07:06	15:47 (2)	06:11	06:06	05:12	04:45	04:59	05:38	06:23	07:08	06:57	15:19 (2)	07:38
	16:17		17:06	15 16:02 (2)	17:52	19:39	20:24	20:57	20:55	20:13	19:11	18:07	16:13	11 15:30 (2)	15:52
14	07:43		07:04	15:49 (2)	06:09	06:04	05:11	04:45	05:00	05:40	06:25	07:09	06:59	15:21 (2)	07:39
	16:18		17:08	11 16:00 (2)	17:53	19:41	20:25	20:58	20:54	20:11	19:09	18:05	16:12	6 15:27 (2)	15:52
15	07:42		07:02		06:07	06:02	05:09	04:45	05:01	05:41	06:26	07:11	07:00		07:39
	16:19		17:10		17:55	19:42	20:27	20:58	20:53	20:10	19:07	18:03	16:11		15:53
16	07:41		07:00		06:05	06:00	05:08	04:45	05:02	05:43	06:28	07:12	07:02		07:40
	16:21		17:11		17:57	19:44	20:28	20:59	20:52	20:08	19:04	18:01	16:09		15:53
17	07:40		06:59		06:03	05:58	05:07	04:45	05:03	05:44	06:29	07:14	07:03		07:41
	16:22		17:13		17:58	19:46	20:30	20:59	20:51	20:06	19:02	17:59	16:08		15:53
18	07:40		06:57		06:01	05:56	05:05	04:45	05:04	05:46	06:30	07:15	07:05		07:42
	16:24		17:15		18:00	19:47	20:31	21:00	20:50	20:04	19:00	17:57	16:07		15:53
19	07:39		06:55		05:58	05:54	05:04	04:45	05:05	05:47	06:32	07:17	07:07		07:42
	16:25		17:16		18:01	19:49	20:32	21:00	20:49	20:02	18:58	17:55	16:06		15:54
20	07:38		06:53		05:56	05:52	05:03	04:45	05:06	05:48	06:33	07:19	07:08		07:43
	16:27		17:18		18:03	19:50	20:34	21:00	20:48	20:00	18:56	17:53	16:05		15:54
21	07:37		06:51		05:54	05:50	05:02	04:45	05:08	05:50	06:35	07:20	07:10		07:44
	16:28		17:20		18:04	19:52	20:35	21:01	20:47	19:58	18:54	17:51	16:04		15:54
22	07:36		06:49		05:52	05:48	05:00	04:45	05:09	05:51	06:36	07:22	07:11		07:44
	16:30		17:21		18:06	19:53	20:36	21:01	20:46	19:56	18:51	17:49	16:03		15:55
23	07:35		06:47		05:50	05:46	04:59	04:46	05:10	05:53	06:38	07:23	07:13		07:45
	16:32		17:23		18:07	19:55	20:37	21:01	20:45	19:54	18:49	17:47	16:02		15:55
24	07:34		06:46		05:48	05:44	04:58	04:46	05:11	05:54	06:39	07:25	07:14		07:45
	16:33		17:25		18:09	19:56	20:39	21:01	20:44	19:52	18:47	17:46	16:01		15:56
25	07:33		06:44		05:46	05:42	04:57	04:46	05:12	05:56	06:41	06:26	07:16		07:45
	16:35		17:26		18:10	19:58	20:40	21:01	20:42	19:50	18:45	16:44	16:00		15:57
26	07:32		06:42		05:43	05:40	04:56	04:47	05:14	05:57	06:42	06:28	07:17		07:46
	16:36		17:28		18:12	19:59	20:41	21:01	20:41	19:48	18:43	16:42	15:59		15:57
27	07:31		06:40		05:41	05:38	04:55	04:47	05:15	05:59	06:44	06:30	07:18		07:46
	16:38		17:30		18:14	20:01	20:42	21:01	20:40	19:46	18:41	16:40	5 15:26 (2)	15:58	15:58
28	07:29		06:38		05:39	05:37	04:54	04:47	05:16	06:00	06:45	06:31	15:18 (2)	07:20	07:46
	16:40	6 15:55 (2)	17:31		18:15	20:02	20:43	21:01	20:38	19:44	18:38	16:38	12 15:30 (2)	15:58	15:59
29	07:28		15:47 (2)		06:37	05:35	04:53	04:48	05:18	06:02	06:47	06:33	15:15 (2)	07:21	07:47
	16:41	11 15:58 (2)			19:17	20:04	20:44	21:01	20:37	19:42	18:36	16:37	16 15:31 (2)	15:57	15:59
30	07:27		15:45 (2)		06:35	05:33	04:53	04:48	05:19	06:03	06:48	06:35	15:14 (2)	07:23	07:47
	16:43	15 16:00 (2)			19:18	20:05	20:45	21:01	20:36	19:40	18:34	16:35	18 15:32 (2)	15:56	16:00
31	07:25		15:44 (2)		06:33		04:52		05:20	06:04		06:36	15:14 (2)		07:47
	16:44	18 16:02 (2)			19:20		20:47		20:34	19:38		16:33	20 15:34 (2)		16:01
Potential sun hours	270		283		368	411	475	485	490	446	379	335	275		256
Total, worst case	50		285									71	267		

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:

Koncepce území zelená Haná

Licensed user:

Jipocar Power s.r.o
Stritez 3
CZ-588 11 Stritez

Quirin Müller / quirin.mueller@jipocar.cz

Calculated:

20.03.2025 8:32/4.1.273

SHADOW - Calendar

Calculation: Shadow Test Shadow receptor: J - Bojanovice #63

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December		
1	07:47 16:02	07:24 16:46	06:36 17:33	16:18 (2) 16:32 (2)	06:31 19:21	05:31 20:07	04:51 20:48	04:49 21:01	05:22 20:33	06:06 19:36	06:49 18:32	06:38 16:31	07:24 15:56	
2	07:47 16:03	07:23 16:48	06:34 17:34	16:21 (2) 16:29 (2)	06:29 19:23	05:30 20:08	04:50 20:49	04:50 21:00	05:23 20:31	06:07 19:34	06:51 18:30	06:39 16:30	07:25 15:55	
3	07:47 16:04	07:21 16:49	06:32 17:36		06:26 19:24	05:28 20:10	04:50 20:49	04:50 21:00	05:24 20:30	06:09 19:32	06:52 18:28	06:41 16:28	07:27 15:55	
4	07:47 16:06	07:20 16:51	06:30 17:38		06:24 19:26	05:26 20:11	04:49 20:50	04:51 21:00	05:26 20:28	06:10 19:30	06:54 18:26	06:43 16:26	07:28 15:54	
5	07:46 16:07	07:18 16:53	06:28 17:39		06:22 19:27	05:25 20:13	04:48 20:51	04:52 20:59	05:27 20:27	06:12 19:28	06:55 18:24	06:44 16:25	07:29 15:54	
6	07:46 16:08	07:17 16:55	06:26 17:41		06:20 19:29	05:23 20:14	04:48 20:52	04:52 20:59	05:29 20:25	06:13 19:26	06:57 18:21	06:46 16:23	07:30 15:54	
7	07:46 16:09	07:15 16:56	06:24 17:42		06:18 19:30	05:21 20:15	04:47 20:53	04:53 20:58	05:30 20:23	06:15 19:24	06:58 18:19	06:47 16:22	07:31 15:53	
8	07:46 16:10	07:14 16:58	06:22 17:44		06:16 19:32	05:20 20:17	04:47 20:54	04:54 20:58	05:31 20:22	06:16 19:22	07:00 18:17	06:49 16:20	07:33 15:53	
9	07:45 16:11	07:12 17:00	06:19 17:46		06:14 19:33	05:18 20:18	04:46 20:55	04:55 20:57	05:33 20:20	06:17 19:19	07:02 18:15	06:51 16:19	07:34 15:53	
10	07:45 16:13	07:11 17:01	06:17 17:47		06:12 19:35	05:17 20:20	04:46 20:55	04:56 20:57	05:34 20:18	06:19 19:17	07:03 18:13	06:52 16:17	07:35 15:53	
11	07:44 16:14	07:09 17:03	06:15 17:49		06:10 19:36	05:15 20:21	04:46 20:56	04:57 20:56	05:36 20:17	06:20 19:15	07:05 18:11	06:54 16:16	07:36 15:52	
12	07:44 16:15	07:07 17:05	06:13 17:50		06:08 19:38	05:14 20:23	04:46 20:57	04:58 20:55	05:37 20:15	06:22 19:13	07:06 18:09	11 16:53 (2) 17:04 (2)	06:56 16:15	07:37 15:52
13	07:43 16:17	07:06 17:06	06:11 17:52		06:06 19:39	05:12 20:24	04:45 20:57	04:59 20:55	05:38 20:13	06:23 19:11	07:08 18:07	15 16:51 (2) 17:06 (2)	06:57 16:13	07:38 15:52
14	07:43 16:18	07:04 17:08	06:09 17:53		06:04 19:41	05:11 20:25	04:45 20:58	05:00 20:54	05:40 20:11	06:25 19:09	07:09 18:05	19 16:48 (2) 17:07 (2)	06:59 16:12	07:38 15:53
15	07:42 16:19	07:02 17:10	16:21 (2) 17:55		06:02 19:42	05:09 20:27	04:45 20:58	05:01 20:53	05:41 20:10	06:26 19:07	07:11 18:03	21 16:47 (2) 17:08 (2)	07:00 16:11	07:39 15:53
16	07:41 16:21	07:00 17:11	16:19 (2) 17:57		06:00 19:44	05:08 20:28	04:45 20:59	05:02 20:52	05:43 20:08	06:28 19:04	07:12 18:01	22 16:47 (2) 17:09 (2)	07:02 16:09	07:40 15:53
17	07:40 16:22	06:59 17:13	16:17 (2) 17:58		05:58 19:46	05:07 20:30	04:45 20:59	05:03 20:51	05:44 20:06	06:29 19:02	07:14 17:59	23 16:45 (2) 17:08 (2)	07:03 16:08	07:41 15:53
18	07:40 16:24	06:57 17:15	16:16 (2) 18:00		05:56 19:47	05:05 20:31	04:45 21:00	05:04 20:50	05:46 20:04	06:30 19:00	07:15 17:57	24 16:45 (2) 17:09 (2)	07:05 16:07	07:42 15:53
19	07:39 16:25	06:55 17:16	16:16 (2) 18:01		05:54 19:49	05:04 20:32	04:45 21:00	05:05 20:49	05:47 20:02	06:32 18:58	07:17 17:55	24 16:45 (2) 17:09 (2)	07:07 16:06	07:42 15:54
20	07:38 16:27	06:53 17:18	16:15 (2) 18:03		05:52 19:50	05:03 20:34	04:45 21:00	05:06 20:48	05:48 20:00	06:33 18:56	07:19 17:53	24 16:44 (2) 17:08 (2)	07:08 16:05	07:43 15:54
21	07:37 16:28	06:51 17:20	16:14 (2) 18:04		05:50 19:52	05:02 20:35	04:45 21:01	05:08 20:47	05:50 19:58	06:35 18:54	07:20 17:51	23 16:45 (2) 17:08 (2)	07:10 16:04	07:44 15:54
22	07:36 16:30	06:49 17:21	16:14 (2) 18:06		05:48 19:53	05:00 20:36	04:45 21:01	05:09 20:46	05:51 19:56	06:36 18:51	07:22 17:49	22 16:46 (2) 17:08 (2)	07:11 16:03	07:44 15:55
23	07:35 16:32	06:47 17:23	16:14 (2) 18:07		05:46 19:55	04:59 20:37	04:46 21:01	05:10 20:45	05:53 19:54	06:38 18:49	07:23 17:47	21 16:45 (2) 17:06 (2)	07:13 16:02	07:45 15:55
24	07:34 16:33	06:46 17:25	16:14 (2) 18:09		05:44 19:56	04:58 20:39	04:46 21:01	05:11 20:43	05:54 19:52	06:39 18:47	07:25 17:46	20 16:46 (2) 17:06 (2)	07:14 16:01	07:45 15:56
25	07:33 16:35	06:44 17:26	16:14 (2) 18:10		05:42 19:58	04:57 20:40	04:46 21:01	05:12 20:42	05:56 19:50	06:41 18:45	07:26 17:44	17 15:48 (2) 16:05 (2)	07:16 16:00	07:45 15:57
26	07:32 16:36	06:42 17:28	16:15 (2) 18:12		05:40 19:59	04:56 20:41	04:47 21:01	05:14 20:41	05:57 19:48	06:42 18:43	07:28 17:42	13 15:49 (2) 16:02 (2)	07:17 16:01	07:46 15:57
27	07:31 16:38	06:40 17:30	16:15 (2) 18:14		05:38 20:01	04:55 20:42	04:47 21:01	05:15 20:40	05:59 19:46	06:44 18:41	07:30 17:40	7 15:52 (2) 15:59 (2)	07:18 16:00	07:46 15:58
28	07:29 16:40	06:38 17:31	16:17 (2) 18:15		05:37 20:02	04:54 20:43	04:47 21:01	05:16 20:38	06:00 19:44	06:45 18:38	07:31 17:36		07:20 16:01	07:46 15:59
29	07:28 16:41		06:37 19:17		05:35 20:04	04:53 20:44	04:48 21:01	05:18 20:37	06:02 19:42	06:47 18:36	07:33 17:33		07:21 16:01	07:47 15:59
30	07:27 16:43		06:35 19:18		05:33 20:05	04:53 20:45	04:48 21:01	05:19 20:36	06:03 19:40	06:48 18:34	07:34 17:34		07:23 16:01	07:47 15:56
31	07:25 16:44		06:33 19:20			04:52 20:47		05:20 20:34	06:04 19:38		06:36 16:33		07:24 16:01	07:47 15:57
Potential sun hours	270	283	368	411	475	485	490	446	379	335	275	256		
Total, worst case		281	22							306				

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:

Koncepce území zelená Haná

Licensed user:

Jipocar Power s.r.o.
Stritez 3
CZ-588 11 Stritez

Quirin Müller / quirin.mueller@jipocar.cz

Calculated:

20.03.2025 8:32/4.1.273

SHADOW - Calendar

Calculation: Shadow Test Shadow receptor: K - Bojanovice #53

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:47	07:24	15:42 (2)	06:36	06:31	05:31	04:51	04:49	05:22	06:06	06:49	06:38
	16:02	16:46	20	16:02 (2)	17:33	19:21	20:07	20:48	21:01	20:33	19:36	18:32
2	07:47	07:23	15:43 (2)	06:34	06:29	05:30	04:50	04:50	05:23	06:07	06:51	06:39
	16:03	16:48	20	16:03 (2)	17:34	19:23	20:08	20:49	21:00	20:31	19:34	18:30
3	07:47	07:21	15:42 (2)	06:32	06:26	05:28	04:50	04:50	05:24	06:09	06:52	06:41
	16:04	16:49	20	16:02 (2)	17:36	19:24	20:10	20:50	21:00	20:30	19:32	18:28
4	07:47	07:20	15:44 (2)	06:30	06:24	05:26	04:49	04:51	05:26	06:10	06:54	06:43
	16:06	16:51	19	16:03 (2)	17:38	19:26	20:11	20:50	21:00	20:28	19:30	18:26
5	07:46	07:18	15:44 (2)	06:28	06:22	05:24	04:48	04:52	05:27	06:12	06:55	06:44
	16:07	16:53	18	16:02 (2)	17:39	19:27	20:13	20:51	20:59	20:27	19:28	18:24
6	07:46	07:17	15:45 (2)	06:26	06:20	05:23	04:48	04:52	05:28	06:13	06:57	06:46
	16:08	16:55	17	16:02 (2)	17:41	19:29	20:14	20:52	20:59	20:25	19:26	18:21
7	07:46	07:15	15:46 (2)	06:24	06:18	05:21	04:47	04:53	05:30	06:15	06:58	06:47
	16:09	16:56	14	16:00 (2)	17:42	19:30	20:15	20:53	20:58	20:23	19:24	18:19
8	07:46	07:14	15:47 (2)	06:22	06:16	05:20	04:47	04:54	05:31	06:16	07:00	06:49
	16:10	16:58	12	15:59 (2)	17:44	19:32	20:17	20:54	20:58	20:22	19:22	18:17
9	07:45	07:12	15:51 (2)	06:19	06:14	05:18	04:46	04:55	05:33	06:17	07:02	06:51
	16:11	17:00	6	15:57 (2)	17:46	19:33	20:18	20:55	20:57	20:20	19:19	18:15
10	07:45	07:11		06:17	06:12	05:17	04:46	04:56	05:34	06:19	07:03	06:52
	16:13	17:01		17:47	19:35	20:20	20:55	20:57	20:18	19:17	18:13	16:17
11	07:44	07:09		06:15	06:10	05:15	04:46	04:57	05:36	06:20	07:05	06:54
	16:14	17:03		17:49	19:36	20:21	20:56	20:56	20:17	19:15	18:11	16:16
12	07:44	07:07		06:13	06:08	05:14	04:45	04:58	05:37	06:22	07:06	06:56
	16:15	17:05		17:50	19:38	20:23	20:57	20:55	20:15	19:13	18:09	16:15
13	07:43	07:06		06:11	06:06	05:12	04:45	04:59	05:38	06:23	07:08	06:57
	16:17	17:06		17:52	19:39	20:24	20:57	20:55	20:13	19:11	18:07	16:13
14	07:43	07:04		06:09	06:04	05:11	04:45	05:00	05:40	06:25	07:09	06:59
	16:18	17:08		17:53	19:41	20:25	20:58	20:54	20:11	19:09	18:05	16:12
15	07:42	07:02		06:07	06:02	05:09	04:45	05:01	05:41	06:26	07:11	07:00
	16:19	17:10		17:55	19:42	20:27	20:58	20:53	20:10	19:07	18:03	16:11
16	07:41	07:00		06:05	06:00	05:08	04:45	05:02	05:43	06:28	07:12	07:02
	16:21	17:11		17:57	19:44	20:28	20:59	20:52	20:08	19:04	18:01	16:09
17	07:40	06:59		06:03	05:58	05:07	04:45	05:03	05:44	06:29	07:14	07:03
	16:22	17:13		17:58	19:46	20:30	20:59	20:51	20:06	19:02	17:59	16:08
18	07:40	06:57		06:01	05:56	05:05	04:45	05:04	05:46	06:30	07:15	07:05
	16:24	17:15		18:00	19:47	20:31	21:00	20:50	20:04	19:00	17:57	16:07
19	07:39	06:55		05:58	05:54	05:04	04:45	05:05	05:47	06:32	07:17	07:07
	16:25	17:16		18:01	19:49	20:32	21:00	20:49	20:02	18:58	17:55	16:06
20	07:38	06:53		05:56	05:52	05:03	04:45	05:06	05:48	06:33	07:19	07:08
	16:27	17:18		18:03	19:50	20:34	21:00	20:48	20:00	18:56	17:53	16:05
21	07:37	06:51		05:54	05:50	05:02	04:45	05:07	05:50	06:35	07:20	07:10
	16:28	17:20		18:04	19:52	20:35	21:01	20:47	19:58	18:54	17:51	16:04
22	07:36	06:49		05:52	05:48	05:00	04:45	05:09	05:51	06:36	07:22	07:11
	16:30	17:21		18:06	19:53	20:36	21:01	20:46	19:56	18:51	17:49	16:03
23	07:35	06:47		05:50	05:46	04:59	04:46	05:10	05:53	06:38	07:23	07:13
	16:31	17:23		18:07	19:55	20:37	21:01	20:45	19:54	18:49	17:47	16:02
24	07:34	15:47 (2)	06:46	05:48	05:44	04:58	04:46	05:11	05:54	06:39	07:25	07:14
	16:33	7	15:54 (2)	17:25	18:09	19:56	20:39	21:01	20:44	19:52	18:47	17:46
25	07:33	15:45 (2)	06:44	05:46	05:42	04:57	04:46	05:12	05:56	06:41	06:26	07:16
	16:35	11	15:56 (2)	17:26	18:10	19:58	20:40	21:01	20:42	19:50	18:45	16:44
26	07:32	15:45 (2)	06:42	05:43	05:40	04:56	04:47	05:14	05:57	06:42	06:28	07:17
	16:36	13	15:58 (2)	17:28	18:12	19:59	20:41	21:01	20:41	19:48	18:43	16:42
27	07:31	15:43 (2)	06:40	05:41	05:38	04:55	04:47	05:15	05:59	06:44	06:30	07:18
	16:38	16	15:59 (2)	17:29	18:14	20:01	20:42	21:01	20:40	19:46	18:41	16:40
28	07:29	15:43 (2)	06:38	05:39	05:37	04:54	04:47	05:16	06:00	06:45	06:31	07:20
	16:40	17	16:00 (2)	17:31	18:15	20:02	20:43	21:01	20:38	19:44	18:38	16:38
29	07:28	15:43 (2)		06:37	05:35	04:53	04:48	05:18	06:01	06:47	06:33	07:21
	16:41	18	16:01 (2)		19:17	20:04	20:44	21:01	20:37	19:42	18:36	16:37
30	07:27	15:42 (2)		06:35	05:33	04:53	04:48	05:19	06:03	06:48	06:34	07:23
	16:43	19	16:01 (2)		19:18	20:05	20:45	21:01	20:36	19:40	18:34	16:35
31	07:25	15:42 (2)		06:33			04:52		05:20	06:04		06:36
	16:44	20	16:02 (2)		19:20		20:47		20:34	19:38		16:33
Potential sun hours	270		283	368	411	475	485	490	446	379	335	275
Total, worst case	121		146									270

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		