

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

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Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: 76740020095007 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (600)  
Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:05	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
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	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

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 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Alksniš i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (462)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:49	08:13	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:21	08:22
	15:46	16:43	17:46	19:51	20:53	21:50	22:07	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:23	08:24
	15:48	16:46	17:48	19:53	20:55	21:52	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:04	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:22	20:07	18:46	16:30	15:41
4	08:48	08:07	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	21:00	21:54	22:05	21:20	20:04	18:44	16:28	15:41
5	08:47	08:05	06:58	06:36	05:22	04:30	04:32	05:22	06:23	07:23	07:29	08:29
	15:52	16:52	17:54	19:59	21:02	21:56	22:05	21:17	20:01	18:41	16:25	15:40
6	08:47	08:03	06:56	06:34	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:04	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:01	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:28	07:34	08:32
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8	08:45	07:58	06:51	06:28	05:15	04:27	04:35	05:27	06:29	07:30	07:36	08:33
	15:56	16:59	18:01	20:06	21:08	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:45	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:32	07:38	08:34
	15:58	17:01	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:31	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:34	07:40	08:36
	15:59	17:03	18:05	20:10	21:12	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:50	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:38	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:18	22:04	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:49	08:41
	16:06	17:12	18:13	20:18	21:20	22:04	21:56	20:57	19:37	18:18	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:51	08:42
	16:08	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:36
16	08:38	07:41	06:30	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:53	08:43
	16:10	17:17	18:18	20:22	21:23	22:06	21:53	20:52	19:32	18:12	16:04	15:36
17	08:37	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:27	18:07	16:01	15:36
19	08:34	07:33	06:22	06:00	04:53	04:23	04:51	05:49	06:51	07:53	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33	07:31	06:19	05:57	04:52	04:23	04:52	05:51	06:53	07:55	08:01	08:46
	16:18	17:26	18:26	20:31	21:31	22:08	21:47	20:43	19:21	18:02	15:57	15:37
21	08:31	07:29	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:19	18:00	15:56	15:37
22	08:30	07:26	06:14	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:58	15:54	15:38
23	08:28	07:24	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:27	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:35	18:34	20:39	21:38	22:08	21:41	20:33	19:10	17:53	15:51	15:39
25	08:25	07:19	06:06	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:40	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:39	20:43	21:41	22:08	21:37	20:27	19:05	17:48	15:49	15:40
27	08:22	07:14	06:00	05:40	04:40	04:26	05:04	06:05	07:07	08:09	08:15	08:49
	16:32	17:41	18:41	20:45	21:43	22:08	21:35	20:25	19:02	17:46	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:17	08:49
	16:35	17:43	18:43	20:47	21:44	22:08	21:34	20:22	19:00	17:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:19	08:49
	16:37		19:45	20:49	21:46	22:08	21:32	20:20	18:57	17:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:48	22:07	21:30	20:17	18:54	17:39	15:44	15:44
31	08:15		06:49		04:35		05:12	06:13		07:18		08:49
	16:41		19:49		21:49		21:28	20:15		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Apšaukums - Shadow Receptor: 1,0 x 1,0 Azimuth: 3,1° Slope: 90,0° (606)  
 Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:29 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:07	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:34 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:24 21:15	06:25 20:00	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:26 21:13	06:27 20:00	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:28 21:11	06:29 20:00	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:37 22:01	05:30 21:08	06:31 20:00	07:31 18:30	07:38 16:17	08:34 15:38
10	08:43 16:00	07:54 17:04	06:45 18:05	06:23 20:10	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 20:00	07:34 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 20:00	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:02	04:40 21:58	05:35 21:01	06:37 20:00	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:56	05:37 20:59	06:39 20:00	07:40 18:20	07:46 16:10	08:39 15:36
14	08:40 16:06	07:45 17:13	06:35 18:13	06:13 20:18	05:03 21:19	04:25 22:04	04:43 21:55	05:39 20:57	06:41 20:00	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:54	06:43 20:00	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:18	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 20:00	07:46 18:12	07:52 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 20:00	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 20:00	07:50 18:07	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:21 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:48	05:49 20:45	06:51 20:00	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:30	04:24 22:07	04:53 21:47	05:51 20:42	06:53 20:00	07:54 18:02	08:01 15:58	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 20:00	07:57 18:00	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 20:00	07:59 17:58	08:05 15:54	08:46 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	04:47 21:36	04:24 22:08	04:58 21:42	05:57 20:35	06:59 20:00	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:25 22:08	04:59 21:40	05:59 20:32	07:01 20:00	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 20:00	08:05 17:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 20:00	08:07 17:48	08:13 15:49	08:48 15:40
27	08:21 16:33	07:14 17:41	06:00 18:40	05:40 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:05 20:25	07:07 20:00	08:09 17:46	08:14 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:57 18:43	05:38 20:47	04:39 21:44	04:26 22:07	05:07 21:33	06:07 20:22	07:09 20:00	08:12 17:43	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 20:00	08:14 17:41	08:18 15:45	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 20:00	08:16 17:39	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14	07:18 20:00	08:18 17:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Apšūpes - Shadow Receptor:  $1,0 \times 1,0$  Azimuth:  $3,1^\circ$  Slope:  $90,0^\circ$  (478)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12	07:09		06:47	05:30	04:34	04:28	05:14	06:15		07:15		18:04 (PrRR3)	07:20	08:22
	15:46	16:43	17:45		19:51	20:53	21:50	22:06	21:25	20:12		18:51	16	18:20 (PrRR3)	16:34	15:43
2	08:48	08:10	07:06		06:44	05:28	04:33	04:29	05:16	06:17		07:17		18:06 (PrRR3)	07:22	08:23
	15:47	16:45	17:48		19:53	20:55	21:51	22:06	21:23	20:09		18:49	13	18:19 (PrRR3)	16:32	15:42
3	08:48	08:08	07:03		06:41	05:26	04:32	04:30	05:17	06:19		07:19		18:07 (PrRR3)	07:25	08:25
	15:49	16:48	17:50		19:55	20:57	21:53	22:05	21:21	20:06		18:46	9	18:16 (PrRR3)	16:30	15:41
4	08:47	08:06	07:01		06:39	05:24	04:31	04:31	05:19	06:21		07:21		18:11 (PrRR3)	07:27	08:27
	15:50	16:50	17:52		19:57	20:59	21:54	22:05	21:19	20:04		18:43	2	18:13 (PrRR3)	16:27	15:40
5	08:47	08:04	06:58		06:36	05:21	04:30	04:32	05:21	06:23		07:23			07:29	08:28
	15:51	16:52	17:54		19:59	21:01	21:55	22:04	21:17	20:01		18:41			16:25	15:40
6	08:46	08:02	06:56		06:33	05:19	04:29	04:33	05:23	06:25		07:25			07:31	08:30
	15:53	16:54	17:56		20:01	21:03	21:57	22:03	21:15	19:59		18:38			16:23	15:39
7	08:46	08:00	06:53		06:31	05:17	04:28	04:34	05:25	06:27		07:27			07:33	08:31
	15:54	16:57	17:58		20:03	21:05	21:58	22:03	21:13	19:56		18:36			16:21	15:38
8	08:45	07:58	06:50		06:28	05:15	04:27	04:35	05:27	06:29		07:29			07:35	08:33
	15:56	16:59	18:00		20:05	21:07	21:59	22:02	21:11	19:53		18:33			16:19	15:38
9	08:44	07:56	06:48		06:25	05:13	04:27	04:36	05:29	06:31		07:31			07:38	08:34
	15:58	17:01	18:03		20:07	21:09	22:00	22:01	21:08	19:51		18:30			16:17	15:37
10	08:44	07:54	06:45		06:23	05:11	04:26	04:37	05:31	06:33		07:33			07:40	08:35
	15:59	17:03	18:05	6	17:37 (PrRR3)	20:09	21:11	22:01	22:00	21:06		19:48			16:15	15:37
11	08:43	07:52	06:43		06:20	05:09	04:25	04:39	05:33	06:35		07:36			07:42	08:37
	16:01	17:06	18:07	11	17:39 (PrRR3)	20:12	21:13	22:02	21:59	21:04		19:45			16:13	15:37
12	08:42	07:49	06:40		06:18	05:06	04:25	04:40	05:35	06:37		07:38			07:44	08:38
	16:03	17:08	18:09	14	17:40 (PrRR3)	20:14	21:15	22:03	21:58	21:01		19:43			16:11	15:36
13	08:41	07:47	06:37		06:15	05:04	04:24	04:41	05:37	06:39		07:40			07:46	08:39
	16:04	17:10	18:11	18	17:43 (PrRR3)	20:16	21:17	22:03	21:57	20:59		19:40			16:09	15:36
14	08:40	07:45	06:35		06:12	05:03	04:24	04:43	05:39	06:41		07:42			07:48	08:40
	16:06	17:12	18:13	20	17:44 (PrRR3)	20:18	21:19	22:04	21:55	20:57		19:37			16:07	15:36
15	08:39	07:43	06:32		06:10	05:01	04:24	04:44	05:41	06:43		07:44			07:50	08:41
	16:08	17:15	18:15	21	17:44 (PrRR3)	20:20	21:21	22:05	21:54	20:54		19:34			16:06	15:36
16	08:38	07:40	06:29		06:07	04:59	04:24	04:46	05:43	06:45		07:46			07:53	08:42
	16:10	17:17	18:17	22	17:45 (PrRR3)	20:22	21:23	22:05	21:53	20:52		19:32			16:04	15:36
17	08:36	07:38	06:27		06:05	04:57	04:23	04:47	05:45	06:47		07:48			07:55	08:43
	16:12	17:19	18:20	22	17:44 (PrRR3)	20:24	21:25	22:06	21:51	20:50		19:29			16:02	15:36
18	08:35	07:36	06:24		06:02	04:55	04:23	04:49	05:47	06:49		07:50			07:57	08:44
	16:14	17:21	18:22	21	17:43 (PrRR3)	20:26	21:27	22:06	21:50	20:47		19:26			16:00	15:36
19	08:34	07:33	06:21		06:00	04:53	04:23	04:51	05:49	06:51		07:52			07:59	08:45
	16:16	17:23	18:24	20	17:42 (PrRR3)	20:28	21:29	22:07	21:49	20:45		19:24			15:59	15:36
20	08:32	07:31	06:19		05:57	04:51	04:23	04:52	05:51	06:53		07:54		18:16 (PrRR3)	08:01	08:45
	16:18	17:26	18:26	19	17:42 (PrRR3)	20:30	21:30	22:07	21:47	20:42		19:21	3	18:19 (PrRR3)	18:02	15:37
21	08:31	07:28	06:16		05:55	04:50	04:23	04:54	05:53	06:55		07:57		18:11 (PrRR3)	08:03	08:46
	16:20	17:28	18:28	16	17:40 (PrRR3)	20:32	21:32	22:07	21:45	20:40		19:18	12	18:23 (PrRR3)	18:00	15:37
22	08:29	07:26	06:13		05:52	04:48	04:24	04:56	05:55	06:57		07:59		18:09 (PrRR3)	07:59	08:47
	16:22	17:30	18:30	13	17:38 (PrRR3)	20:34	21:34	22:08	21:44	20:37		19:16	15	18:24 (PrRR3)	17:57	15:38
23	08:28	07:24	06:11		05:50	04:46	04:24	04:57	05:57	06:59		08:01		18:07 (PrRR3)	08:01	08:47
	16:24	17:32	18:32	7	17:35 (PrRR3)	20:36	21:36	22:08	21:42	20:35		19:13	18	18:25 (PrRR3)	17:55	15:38
24	08:26	07:21	06:08		05:47	04:45	04:24	04:59	05:59	07:01		08:03		18:06 (PrRR3)	08:03	08:47
	16:26	17:34	18:34		20:39	21:38	22:08	21:40	20:32	19:10		18:26 (PrRR3)	20	18:26 (PrRR3)	17:53	15:39
25	08:25	07:19	06:05		05:45	04:43	04:25	05:01	06:01	07:03		08:05 (PrRR3)		18:05 (PrRR3)	07:05	08:11
	16:28	17:37	18:36		20:41	21:39	22:08	21:39	20:30	19:08		18:26 (PrRR3)	21	18:26 (PrRR3)	16:50	15:39
26	08:23	07:16	06:03		05:42	04:42	04:25	05:03	06:03	07:05		08:07		18:04 (PrRR3)	07:07	08:13
	16:30	17:39	18:38		20:43	21:41	22:08	21:37	20:27	19:05		18:26 (PrRR3)	22	18:26 (PrRR3)	16:48	15:40
27	08:21	07:14	06:00		05:40	04:40	04:25	05:04	06:05	07:07		08:09		18:04 (PrRR3)	07:09	08:15
	16:32	17:41	18:40		20:45	21:43	22:08	21:35	20:25	19:02		18:26 (PrRR3)	22	18:26 (PrRR3)	16:45	15:41
28	08:20	07:11	05:57		05:38	04:39	04:26	05:06	06:07	07:09		08:13 (PrRR3)		18:03 (PrRR3)	07:12	08:16
	16:34	17:43	18:42		20:47	21:44	22:07	21:33	20:22	18:59		18:25 (PrRR3)	22	18:25 (PrRR3)	16:43	15:42
29	08:18		06:55		05:35	04:38	04:27	05:08	06:09	07:11		18:03 (PrRR3)		18:03 (PrRR3)	07:14	08:18
	16:37		19:45		20:49	21:46	22:07	21:31	20:20	18:57		18:24 (PrRR3)	21	18:24 (PrRR3)	16:41	15:43
30	08:16		06:52		05:33	04:36	04:27	05:10	06:11	07:13		18:04 (PrRR3)		18:04 (PrRR3)	07:16	08:20
	16:39		19:47		20:51	21:47	22:07	21:29	20:17	18:54		18:23 (PrRR3)	19	18:23 (PrRR3)	16:38	15:44
31	08:14		06:49			04:35		05:12	06:13			07:18				08:48
	16:41		19:49			21:49		21:27	20:14			16:36				15:45
Potential sun hours	236	266	366		426	507	528	529	469	384		324			248	217
Total, worst case				230						195		40				
Sun reduction				0,39						0,43		0,29				
Oper. time red.				1,00						1,00		1,00				
Wind dir. red.				1,00						1,00		1,00				
Total reduction				0,39						0,43		0,29				
Total, real				90						84		12				

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Atvasites - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (553)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:15	06:17	07:17	07:22	08:23
	15:47	16:45	17:47	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:05	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:05	15:36
16	08:37	07:40	06:29	06:07	04:59	04:23	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
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	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
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	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
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	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Avenes - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (567)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:29 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:24 21:15	06:25 20:01	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:02	05:26 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:28 21:11	06:29 20:01	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:37 22:01	05:29 21:08	06:31 20:01	07:31 18:30	07:38 16:17	08:34 15:38
10	08:43 15:59	07:54 17:04	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 20:01	07:33 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 20:01	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:02	04:40 21:58	05:35 21:01	06:37 20:01	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:56	05:37 20:59	06:39 20:01	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:13 20:18	05:03 21:19	04:25 22:04	04:43 21:55	05:39 20:57	06:41 20:01	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:54	06:43 20:01	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:18	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 20:01	07:46 18:12	07:52 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 20:01	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 20:01	07:50 18:07	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:21 18:24	06:00 20:28	04:53 21:29	04:24 22:07	04:51 21:48	05:49 20:45	06:51 20:01	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:30	04:24 22:07	04:53 21:47	05:51 20:42	06:53 20:01	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 20:01	07:57 18:00	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:07	04:56 21:44	05:55 20:37	06:57 20:01	07:59 18:01	08:05 15:54	08:46 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	04:47 21:36	04:24 22:08	04:58 21:42	05:57 20:35	06:59 20:01	08:01 18:01	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:25 22:08	04:59 21:40	05:59 20:32	07:01 20:01	08:03 18:03	08:09 15:52	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 20:01	08:05 18:05	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 20:01	08:07 18:07	08:13 15:49	08:48 15:40
27	08:21 16:33	07:14 17:41	06:00 18:40	05:40 20:45	04:41 21:42	04:26 22:07	05:05 21:35	06:05 20:25	07:07 20:01	08:09 18:09	08:14 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:57 18:43	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	07:09 20:01	08:12 18:00	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:45	04:27 22:07	05:08 21:31	06:09 20:20	07:11 20:01	08:14 18:07	08:18 15:45	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 20:01	08:16 18:04	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:48		05:12 21:27	06:13 20:14	07:18 20:01			08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Avenaji - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (605)  
Assumptions for shadow calculationsSunshine probability S (Average daily sunshine hours) []  
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59No 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	08:48 15:46 21	10:03 (PrRR3) 10:24 (PrRR3) 16:43	08:13 07:09 17:46	06:47 19:51 20:53	05:31 21:50 21:50	04:34 22:07 21:26	04:28 22:07 21:26	05:14 22:07 21:26	06:15 20:12 18:52	07:15 18:52 16:34	07:20 18:52 16:34	08:22 15:43 11
2	08:48 15:48 20	10:03 (PrRR3) 10:23 (PrRR3) 16:46	08:11 07:06 17:48	06:44 19:53 20:55	05:28 21:52 21:52	04:33 22:06 21:24	04:29 22:06 21:24	05:16 22:09 18:49	06:17 20:09 18:49	07:17 18:49 16:32	07:23 18:49 16:32	08:24 15:42 14
3	08:48 15:49 20	10:04 (PrRR3) 10:24 (PrRR3) 16:48	08:09 07:04 17:50	06:41 19:55 20:57	05:26 21:53 21:53	04:32 22:06 21:22	04:30 22:06 21:22	05:18 22:07 18:46	06:19 20:07 18:46	07:19 18:46 16:30	07:25 18:46 16:30	08:25 15:41 15
4	08:48 15:50 20	10:04 (PrRR3) 10:24 (PrRR3) 16:50	08:07 07:01 17:52	06:39 19:57 20:59	05:24 21:54 21:54	04:31 22:05 21:19	04:31 22:05 21:19	05:20 22:04 21:17	06:21 20:04 18:41	07:21 18:44 16:27	07:27 18:44 16:27	08:27 15:41 17
5	08:47 15:52 19	10:05 (PrRR3) 10:24 (PrRR3) 16:52	08:05 07:54 17:54	06:36 19:59 21:01	05:22 21:56 21:56	04:30 22:04 21:17	04:32 22:04 21:17	05:21 20:01 18:41	06:23 20:01 18:41	07:23 18:41 16:25	07:29 18:41 16:25	08:29 15:40 18
6	08:47 15:53 19	10:06 (PrRR3) 10:25 (PrRR3) 16:54	08:03 07:56 17:56	06:33 20:01 21:04	05:19 21:57 21:57	04:29 22:04 21:15	04:33 22:04 21:15	05:23 19:59 18:38	06:25 19:59 18:38	07:25 18:38 16:23	07:31 18:38 16:23	08:30 15:39 19
7	08:46 15:54 18	10:07 (PrRR3) 10:25 (PrRR3) 16:57	08:01 07:58 17:58	06:31 20:03 21:06	05:17 21:58 21:58	04:28 22:03 21:13	04:34 22:03 21:13	05:25 19:56 18:36	06:27 19:56 18:36	07:27 18:36 16:21	07:33 18:36 16:21	08:32 15:38 19
8	08:45 15:56 16	10:08 (PrRR3) 10:25 (PrRR3) 16:59	07:58 07:51 18:01	06:28 20:05 21:08	05:15 21:59 21:59	04:27 22:02 21:11	04:35 22:02 21:11	05:27 19:53 18:33	06:29 19:53 18:33	07:30 18:33 16:19	07:36 18:33 16:19	08:33 15:38 20
9	08:45 15:58 15	10:09 (PrRR3) 10:24 (PrRR3) 17:01	07:56 07:48 18:03	06:26 20:08 21:10	05:13 21:10 22:00	04:27 22:01 21:09	04:36 22:01 21:09	05:29 19:51 18:30	06:31 19:51 18:30	07:32 18:30 16:17	07:38 18:30 16:17	08:34 15:37 20
10	08:44 15:59 14	10:10 (PrRR3) 10:24 (PrRR3) 17:03	07:54 07:48 18:05	06:23 20:10 21:12	05:11 21:12 22:01	04:26 22:01 21:06	04:38 22:01 21:06	05:31 19:48 18:28	06:33 19:48 18:28	07:34 18:28 16:15	07:40 18:28 16:15	08:36 15:37 21
11	08:43 16:01 11	10:11 (PrRR3) 10:22 (PrRR3) 17:06	07:52 07:46 18:07	06:20 20:12 21:14	05:09 21:14 22:02	04:26 22:01 21:04	04:39 22:01 21:04	05:33 19:45 18:25	06:35 19:45 18:25	07:36 18:25 16:13	07:42 18:25 16:13	08:37 15:37 21
12	08:42 16:03 9	10:13 (PrRR3) 10:22 (PrRR3) 17:08	07:50 07:48 18:09	06:18 20:14 21:16	05:07 21:16 22:03	04:25 22:03 21:02	04:40 22:03 21:02	05:35 19:43 18:23	06:37 19:43 18:23	07:38 18:23 16:11	07:44 18:23 16:11	08:38 15:36 21
13	08:41 16:04 4	10:16 (PrRR3) 10:20 (PrRR3) 17:10	07:47 07:40 18:11	06:15 20:16 21:17	05:05 21:17 22:04	04:25 22:04 21:57	04:42 22:04 21:57	05:37 19:40 18:20	06:39 19:40 18:20	07:40 18:20 16:09	07:46 18:20 16:09	08:39 15:36 21
14	08:40 16:06 21	10:17 (PrRR3) 10:21 (PrRR3) 17:12	07:45 07:40 18:13	06:13 20:18 21:19	05:03 21:19 22:04	04:24 22:04 21:56	04:43 22:04 21:56	05:39 19:37 18:18	06:41 19:37 18:18	07:42 18:18 16:07	07:49 18:18 16:07	08:40 15:36 22
15	08:39 16:08 16	10:18 (PrRR3) 10:22 (PrRR3) 17:15	07:43 07:40 18:15	06:10 20:20 21:21	05:01 21:21 22:05	04:24 22:05 21:54	04:44 22:05 21:54	05:41 19:35 18:15	06:43 19:35 18:15	07:44 18:15 16:06	07:51 18:15 16:06	08:41 15:36 22
16	08:38 16:10 17	10:19 (PrRR3) 10:23 (PrRR3) 17:17	07:41 07:40 18:18	06:07 20:22 21:23	04:59 22:06 21:53	04:24 22:06 21:53	04:46 22:06 21:53	05:43 19:32 18:12	06:45 19:32 18:12	07:46 18:12 16:04	07:53 18:12 16:04	08:42 15:36 22
17	08:37 16:12 18	10:20 (PrRR3) 10:24 (PrRR3) 17:19	07:38 07:40 18:20	06:05 20:24 21:25	04:57 22:06 21:52	04:23 22:06 21:52	04:47 22:06 21:52	05:45 19:29 18:10	06:47 19:29 18:10	07:48 18:10 16:02	07:55 18:10 16:02	08:43 15:36 22
18	08:35 16:14 19	10:21 (PrRR3) 10:25 (PrRR3) 17:21	07:36 07:40 18:22	06:02 20:26 21:27	04:55 22:07 21:50	04:23 22:07 21:50	04:49 22:07 21:50	05:47 19:27 18:07	06:49 19:27 18:07	07:50 18:07 16:01	07:57 18:07 16:01	08:44 15:36 22
19	08:34 16:16 20	10:22 (PrRR3) 10:26 (PrRR3) 17:23	07:33 07:40 18:24	06:00 20:28 21:29	04:53 22:07 21:49	04:23 22:07 21:49	04:51 22:07 21:49	05:49 19:24 18:05	06:51 19:24 18:05	07:52 18:05 15:59	07:59 18:05 15:59	08:45 15:36 23
20	08:33 16:18 21	10:23 (PrRR3) 10:27 (PrRR3) 17:24	07:31 07:40 18:26	05:57 20:30 21:31	04:52 22:07 21:47	04:23 22:07 21:47	04:52 22:07 21:47	05:51 19:21 18:02	06:53 19:21 18:02	07:55 18:02 15:57	08:01 18:02 15:57	08:46 15:37 23
21	08:31 16:20 22	10:24 (PrRR3) 10:28 (PrRR3) 17:25	07:29 07:40 18:28	05:55 20:33 21:33	04:50 22:08 21:46	04:23 22:08 21:46	04:54 22:08 21:46	05:53 19:18 18:00	06:55 19:18 18:00	07:57 18:00 15:56	08:03 18:00 15:56	08:46 15:37 23
22	08:30 16:22 23	10:25 (PrRR3) 10:29 (PrRR3) 17:26	07:28 07:40 18:30	05:52 20:35 21:34	04:48 22:08 21:44	04:24 22:08 21:44	04:56 22:08 21:44	05:55 19:16 17:58	06:57 19:16 17:58	07:59 17:58 15:54	08:05 17:58 15:54	08:47 15:38 23
23	08:28 16:24 24	10:26 (PrRR3) 10:30 (PrRR3) 17:27	07:26 07:40 18:32	05:50 20:37 21:36	04:46 22:08 21:42	04:24 22:08 21:42	04:57 22:08 21:42	05:57 19:13 17:55	06:59 19:13 17:55	08:01 17:55 15:53	08:07 17:55 15:53	08:47 15:38 23
24	08:27 16:26 25	10:27 (PrRR3) 10:31 (PrRR3) 17:28	07:24 07:40 18:34	05:48 20:39 21:38	04:45 22:08 21:41	04:24 22:08 21:41	04:59 22:08 21:41	05:59 19:10 17:53	07:01 19:10 17:53	08:03 17:53 15:51	08:09 17:53 15:51	08:48 15:39 23
25	08:25 16:28 26	10:28 (PrRR3) 10:32 (PrRR3) 17:29	07:22 07:40 18:36	05:46 20:41 21:39	04:43 22:08 21:39	04:25 22:08 21:39	05:01 22:08 21:39	06:01 19:08 16:50	07:03 19:08 16:50	07:05 16:50 15:50	08:11 16:50 15:50	08:48 15:39 22
26	08:23 16:30 27	10:29 (PrRR3) 10:33 (PrRR3) 17:30	07:20 07:40 18:38	05:44 20:43 21:41	04:42 22:08 21:37	04:25 22:08 21:37	05:03 22:08 21:37	06:03 19:05 16:48	07:05 19:05 16:48	07:07 16:48 15:49	08:13 16:48 15:49	08:48 15:40 22
27	08:22 16:32 28	10:30 (PrRR3) 10:34 (PrRR3) 17:31	07:18 07:40 18:41	05:42 20:45 21:43	04:40 22:08 21:35	04:26 22:08 21:35	05:04 22:08 21:35	06:05 19:02 16:46	07:07 19:02 16:46	07:10 16:46 15:48	08:15 16:46 15:48	08:49 15:41 23
28	08:20 16:35 29	10:31 (PrRR3) 10:35 (PrRR3) 17:32	07:16 07:40 18:43	05:40 20:47 21:44	04:39 22:08 21:33	04:26 22:08 21:33	05:06 22:08 21:33	06:07 19:00 16:43	07:09 19:00 16:43	07:12 16:43 15:46	08:17 16:43 15:46	08:49 15:42 22
29	08:18 16:37 30	10:32 (PrRR3) 10:36 (PrRR3) 17:33	07:14 07:40 18:45	05:38 20:49 21:46	04:38 22:07 21:32	04:27 22:07 21:32	05:08 22:07 21:32	06:09 18:57 16:41	07:11 18:57 16:41	07:14 16:41 15:45	08:18 16:41 15:45	08:49 15:43 22
30	08:16 16:39 31	10:33 (PrRR3) 10:37 (PrRR3) 17:34	07:12 07:40 18:47	05:36 20:51 21:47	04:36 22:07 21:30	04:27 22:07 21:30	05:10 22:07 21:30	06:11 18:54 16:39	07:13 18:54 16:39	07:16 16:39 15:44	08:20 16:39 15:44	08:49 15:44 22
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case	206									13		640
Sun reduction	0,13									0,08		0,08
Oper. time red.	1,00									1,00		1,00
Wind dir. red.	1,00									1,00		1,00
Total reduction	0,13									0,08		0,08
Total, real	28									1		54

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Avoti - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (490)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:57	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:05	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Avotini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (412)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12	07:09	06:47	05:31	04:35	04:29	05:14	06:16	07:15	07:20	15:51 (DD3)	08:22
2	15:47	16:44	17:46	19:51	20:53	21:50	22:06	21:26	20:12	18:52	16:35	16:01 (DD3)	15:44
3	08:48	08:11	07:06	06:44	05:29	04:34	04:30	05:16	06:18	07:17	07:23	15:52 (DD3)	08:23
4	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:58 (DD3)	15:43
5	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:18	06:20	07:19	07:25		08:25
6	15:50	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:47	16:30		15:42
7	08:47	08:07	07:01	06:39	05:24	04:32	04:32	05:20	06:22	07:22	07:27		08:27
8	15:51	16:51	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28		15:41
9	08:47	08:05	06:59	06:36	05:22	04:31	04:33	05:22	06:24	07:24	07:29		08:28
10	15:52	16:53	17:55	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:26		15:40
11	08:46	08:03	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31		08:30
12	15:54	16:55	17:57	20:01	21:03	21:56	22:03	21:15	19:59	18:39	16:24		15:40
13	08:46	08:00	06:53	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:33		08:31
14	15:55	16:57	17:59	20:04	21:05	21:58	22:03	21:13	19:56	18:36	16:22		15:39
15	08:45	07:58	16:25 (DD3)	06:51	06:29	05:16	04:28	04:36	05:28	06:30	07:30		08:33
16	15:57	16:59	16:26 (DD3)	18:01	20:06	21:07	21:59	22:02	21:11	19:54	18:33		15:39
17	08:44	07:56	16:23 (DD3)	06:48	06:26	05:13	04:28	04:37	05:30	06:32	07:32		08:34
18	15:58	17:02	16:29 (DD3)	18:03	20:08	21:09	22:00	22:01	21:08	19:51	18:31		15:38
19	08:44	07:54	16:21 (DD3)	06:46	06:23	05:11	04:27	04:38	05:32	06:34	07:34		08:35
20	16:00	17:04	16:32 (DD3)	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28		15:38
21	08:43	07:52	16:20 (DD3)	06:43	06:21	05:09	04:26	04:40	05:34	06:36	07:36		08:37
22	16:02	17:06	16:34 (DD3)	18:07	20:12	21:13	22:02	21:59	21:04	19:46	18:26		15:37
23	08:42	07:50	16:19 (DD3)	06:40	06:18	05:07	04:26	04:41	05:36	06:38	07:38		08:38
24	16:03	17:08	16:37 (DD3)	18:09	20:14	21:15	22:02	21:58	21:02	19:43	18:23		15:37
25	08:41	07:47	16:19 (DD3)	06:38	06:16	05:05	04:25	04:42	05:38	06:40	07:40		08:39
26	16:05	17:11	16:39 (DD3)	18:12	20:16	21:17	22:03	21:57	20:59	19:40	18:20		15:37
27	08:40	07:45	16:18 (DD3)	06:35	06:13	05:03	04:25	04:44	05:40	06:42	07:42		08:40
28	16:07	17:13	16:39 (DD3)	18:14	20:18	21:19	22:04	21:55	20:57	19:37	18:18		15:37
29	08:39	07:43	16:19 (DD3)	06:32	06:10	05:01	04:25	04:45	05:42	06:44	07:44		08:41
30	16:09	17:15	16:39 (DD3)	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15		15:37
31	08:38	07:41	16:18 (DD3)	06:30	06:08	04:59	04:24	04:47	05:44	06:45	07:46		08:42
32	16:11	17:17	16:39 (DD3)	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13		15:37
33	08:36	07:38	16:19 (DD3)	06:27	06:05	04:58	04:24	04:48	05:46	06:47	07:48		08:43
34	16:13	17:20	16:39 (DD3)	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10		15:37
35	08:35	07:36	16:19 (DD3)	06:24	06:03	04:56	04:24	04:50	05:48	06:49	07:50		08:44
36	16:14	17:22	16:38 (DD3)	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08		15:37
37	08:34	07:33	16:20 (DD3)	06:22	06:00	04:54	04:24	04:51	05:50	06:51	07:53		08:45
38	16:16	17:24	16:37 (DD3)	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05		15:37
39	08:32	07:31	16:21 (DD3)	06:19	05:58	04:52	04:24	04:53	05:52	06:53	07:55	16:56 (DD3)	08:45
40	16:18	17:26	16:36 (DD3)	18:26	20:30	21:31	22:07	21:47	20:43	19:21	18:03	17:03 (DD3)	15:38
41	08:31	07:29	16:23 (DD3)	06:16	05:55	04:50	04:24	04:55	05:54	06:55	07:57	16:53 (DD3)	08:46
42	16:20	17:28	16:34 (DD3)	18:28	20:33	21:32	22:07	21:45	20:40	19:19	18:00	17:05 (DD3)	15:38
43	08:30	07:26	16:26 (DD3)	06:14	05:53	04:49	04:25	04:56	05:56	06:57	07:59	16:51 (DD3)	08:47
44	16:22	17:31	16:31 (DD3)	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:58	17:06 (DD3)	15:38
45	08:28	07:24	06:11	05:50	04:47	04:25	04:58	05:58	06:59	08:01	16:50 (DD3)	08:07	08:47
46	16:25	17:33	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	17:08 (DD3)	15:53	15:39
47	08:26	07:21	06:08	05:48	04:46	04:25	05:00	06:00	07:01	08:03	16:49 (DD3)	08:09	08:47
48	16:27	17:35	18:35	20:39	21:38	22:08	21:40	20:33	19:11	17:53	17:08 (DD3)	15:52	15:39
49	08:25	07:19	06:06	05:45	04:44	04:25	05:02	06:02	07:03	08:05	15:48 (DD3)	08:11	08:48
50	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	16:51	16:08 (DD3)	15:51	15:40
51	08:23	07:16	06:03	05:43	04:43	04:26	05:03	06:04	07:05	08:07	15:49 (DD3)	08:13	08:48
52	16:31	17:39	18:39	20:43	21:41	22:08	21:37	20:27	19:05	16:48	16:09 (DD3)	15:49	15:41
53	08:22	07:14	06:00	05:41	04:41	04:26	05:05	06:06	07:07	08:10	15:48 (DD3)	08:15	08:48
54	16:33	17:42	18:41	20:45	21:42	22:08	21:35	20:25	19:03	16:46	16:09 (DD3)	15:48	15:42
55	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:09	08:12	15:48 (DD3)	08:16	08:48
56	16:35	17:44	18:43	20:47	21:44	22:07	21:33	20:22	19:00	16:44	16:08 (DD3)	15:47	15:43
57	08:18		06:55	05:36	04:38	04:28	05:09	06:10	07:11	08:14	15:49 (DD3)	08:18	08:48
58	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	16:08 (DD3)	15:46	15:44
59	08:16		06:52	05:33	04:37	04:28	05:11	06:12	07:13	08:16	15:49 (DD3)	08:20	08:48
60	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:55	16:39	16:06 (DD3)	15:45	15:45
61	08:14		06:50		04:36		05:13	06:14		07:18	15:49 (DD3)		08:48
62	16:42		19:49		21:49		21:28	20:15		16:37	16:03 (DD3)		15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248		217
Total, worst case		219								202	16		
Sun reduction		0,22								0,29	0,08		
Oper. time red.		1,00								1,00	1,00		
Wind dir. red.		1,00								1,00	1,00		
Total reduction		0,22								0,29	0,08		
Total, real		49								59	1		

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Bajari - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (586)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:24 21:15	06:25 19:59	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:02	05:26 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:28 21:11	06:29 19:53	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:37 22:01	05:29 21:08	06:31 19:51	07:31 18:30	07:38 16:17	08:34 15:38
10	08:43 15:59	07:54 17:04	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 19:48	07:34 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:02	04:40 21:58	05:35 21:01	06:37 19:43	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:56	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:13 20:18	05:03 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:54	06:43 19:35	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:18	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	07:52 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	07:57 16:01	08:44 15:36
19	08:34 16:16	07:33 17:24	06:21 18:24	06:00 20:28	04:53 21:29	04:24 22:07	04:51 21:48	05:49 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:30	04:24 22:07	04:52 21:47	05:51 20:42	06:53 19:21	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:07	04:56 21:44	05:55 20:37	06:57 19:16	07:59 17:58	08:05 15:54	08:46 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	04:47 21:36	04:24 22:08	04:58 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:25 22:08	04:59 21:40	05:59 20:32	07:01 19:10	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 19:08	08:05 16:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:40
27	08:21 16:33	07:14 17:41	06:00 18:40	05:40 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:05 20:25	07:07 19:02	08:09 16:46	08:14 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:57 18:43	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	07:09 19:00	08:12 16:43	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 18:57	08:14 16:41	08:18 15:45	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 18:54	08:16 16:39	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:48		05:12 21:27	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Balož i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (547)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Betiški 1 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (576)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:27	15:41
5	08:47	08:04	06:58	06:36	05:22	04:30	04:32	05:22	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:55	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:39
8	08:45	07:58	06:50	06:28	05:15	04:28	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:38
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:24	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:57	04:52	04:24	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:41	04:26	05:05	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:35	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:37	04:28	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: BetiŠ ku kapseta - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (580)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:46	19:51	20:53	21:50	22:06	21:25	20:12	18:52	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:41
5	08:47	08:04	06:58	06:36	05:22	04:30	04:32	05:22	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:24	06:25	07:25	07:31	08:30
	15:53	16:55	17:56	20:01	21:03	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:55	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:39
8	08:45	07:58	06:50	06:28	05:15	04:28	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:38
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:43	18:23	16:11	15:37
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:05	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:24	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:24	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:57	04:52	04:24	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:24	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:52	15:39
25	08:25	07:19	06:05	05:45	04:44	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:40
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:41	04:26	05:05	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:46	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:35	17:43	18:42	20:47	21:44	22:07	21:33	20:22	19:00	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:37	04:28	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Brencani - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (501)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January	February	March	April	May	June
1	08:48 15:46	08:12 16:43	07:09 17:45	06:47 19:51	05:31 20:53	04:34 20:38 (Pr3a)
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	19:21 (AP2) 19:24 (AP2)	21:50 21:51
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	19:18 (AP2) 19:26 (AP2)	20:38 (Pr3a) 21:53
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	19:17 (AP2) 19:29 (AP2)	20:40 (Pr3a) 21:54
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	19:16 (AP2) 19:30 (AP2)	20:40 (Pr3a) 21:55
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	19:16 (AP2) 19:33 (AP2)	20:40 (Pr3a) 21:56
7	08:46 15:55	08:00 16:57	06:53 17:58	06:31 20:03	19:15 (AP2) 19:34 (AP2)	20:41 (Pr3a) 21:58
8	08:45 15:56	07:58 16:59	06:50 18:01	06:28 20:05	19:14 (AP2) 19:33 (AP2)	20:42 (Pr3a) 21:59
9	08:44 15:58	07:56 17:01	06:48 18:03	06:25 20:07	19:14 (AP2) 19:33 (AP2)	20:42 (Pr3a) 22:00
10	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:09	19:14 (AP2) 19:32 (AP2)	20:43 (Pr3a) 22:01
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	19:15 (AP2) 19:31 (AP2)	20:44 (Pr3a) 22:02
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	19:16 (AP2) 19:29 (AP2)	20:44 (Pr3a) 22:03
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	19:18 (AP2) 19:27 (AP2)	20:45 (Pr3a) 22:03
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	05:03 21:19	20:46 (Pr3a) 22:04
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	20:47 (Pr3a) 22:05
16	08:37 16:10	07:40 17:17	06:29 18:17	06:07 20:22	04:59 21:23	20:47 (Pr3a) 22:05
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	20:47 (Pr3a) 22:06
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	20:48 (Pr3a) 22:06
19	08:34 16:16	07:33 17:24	06:21 18:24	06:00 20:28	04:53 21:29	20:49 (Pr3a) 22:07
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:30	20:50 (Pr3a) 22:07
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	20:50 (Pr3a) 22:07
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	20:50 (Pr3a) 22:08
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	04:47 21:36	20:50 (Pr3a) 22:08
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	20:50 (Pr3a) 22:08
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:43 21:39	20:50 (Pr3a) 22:08
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	04:42 21:41	20:50 (Pr3a) 22:08
27	08:21 16:32	07:14 17:41	06:00 18:40	05:40 20:45	04:40 21:42	20:49 (Pr3a) 22:08
28	08:20 16:35	07:11 17:43	05:57 18:42	05:38 20:47	04:39 21:44	20:49 (Pr3a) 22:07
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	20:48 (Pr3a) 22:07
30	08:16 16:39		06:52 19:47	05:33 20:51	04:36 21:47	20:48 (Pr3a) 22:07
31	08:14 16:41		06:49 19:49		04:35 21:49	20:57 (Pr3a)
Potential sun hours	236	266	366	426	507	528
Total, worst case				167	309	287
Sun reduction				0,44	0,56	0,57
Oper. time red.				1,00	1,00	1,00
Wind dir. red.				1,00	1,00	1,00
Total reduction				0,44	0,56	0,57
Total, real				74	174	163

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Brencani - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (501)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	July			August			September			October	November	December
1	04:28	20:48 (Pr3a)	05:14				06:15	19:14 (AP2)	07:15	07:20	08:22	
	22:06	11	20:59 (Pr3a)	21:25			20:12	16	19:30 (AP2)	18:51	16:34	15:43
2	04:29	20:47 (Pr3a)	05:16				06:17		19:13 (AP2)	07:17	07:22	08:23
	22:06	12	20:59 (Pr3a)	21:23			20:09	18	19:31 (AP2)	18:49	16:32	15:42
3	04:30	20:47 (Pr3a)	05:18				06:19		19:13 (AP2)	07:19	07:25	08:25
	22:05	13	21:00 (Pr3a)	21:21			20:06	18	19:31 (AP2)	18:46	16:30	15:41
4	04:31	20:47 (Pr3a)	05:20				06:21		19:12 (AP2)	07:21	07:27	08:27
	22:05	14	21:01 (Pr3a)	21:19			20:04	19	19:31 (AP2)	18:44	16:27	15:41
5	04:32	20:47 (Pr3a)	05:21				06:23		19:11 (AP2)	07:23	07:29	08:28
	22:04	15	21:02 (Pr3a)	21:17			20:01	19	19:30 (AP2)	18:41	16:25	15:40
6	04:33	20:47 (Pr3a)	05:23				06:25		19:11 (AP2)	07:25	07:31	08:30
	22:03	15	21:02 (Pr3a)	21:15			19:59	17	19:28 (AP2)	18:38	16:23	15:39
7	04:34	20:46 (Pr3a)	05:25				06:27		19:11 (AP2)	07:27	07:33	08:31
	22:03	17	21:03 (Pr3a)	21:13			19:56	14	19:25 (AP2)	18:36	16:21	15:39
8	04:35	20:46 (Pr3a)	05:27				06:29		19:11 (AP2)	07:29	07:35	08:33
	22:02	17	21:03 (Pr3a)	21:11			19:53	12	19:23 (AP2)	18:33	16:19	15:38
9	04:36	20:46 (Pr3a)	05:29				06:31		19:12 (AP2)	07:31	07:38	08:34
	22:01	18	21:04 (Pr3a)	21:08			19:51	8	19:20 (AP2)	18:30	16:17	15:37
10	04:38	20:45 (Pr3a)	05:31				06:33		19:14 (AP2)	07:33	07:40	08:35
	22:00	19	21:04 (Pr3a)	21:06			19:48	4	19:18 (AP2)	18:28	16:15	15:37
11	04:39	20:46 (Pr3a)	05:33				06:35			07:36	07:42	08:37
	21:59	19	21:05 (Pr3a)	21:04			19:45			18:25	16:13	15:37
12	04:40	20:46 (Pr3a)	05:35				06:37			07:38	07:44	08:38
	21:58	19	21:05 (Pr3a)	21:01			19:43			18:23	16:11	15:36
13	04:42	20:45 (Pr3a)	05:37				06:39			07:40	07:46	08:39
	21:57	21	21:06 (Pr3a)	20:59			19:40			18:20	16:09	15:36
14	04:43	20:45 (Pr3a)	05:39				06:41			07:42	07:48	08:40
	21:55	21	21:06 (Pr3a)	20:57			19:37			18:17	16:07	15:36
15	04:44	20:46 (Pr3a)	05:41				06:43			07:44	07:50	08:41
	21:54	21	21:07 (Pr3a)	20:54			19:34			18:15	16:06	15:36
16	04:46	20:45 (Pr3a)	05:43				06:45			07:46	07:52	08:42
	21:53	21	21:06 (Pr3a)	20:52			19:32			18:12	16:04	15:36
17	04:48	20:45 (Pr3a)	05:45				06:47			07:48	07:55	08:43
	21:51	21	21:06 (Pr3a)	20:50			19:29			18:10	16:02	15:36
18	04:49	20:46 (Pr3a)	05:47				06:49			07:50	07:57	08:44
	21:50	21	21:07 (Pr3a)	20:47			19:26			18:07	16:01	15:36
19	04:51	20:45 (Pr3a)	05:49				06:51			07:52	07:59	08:45
	21:48	22	21:07 (Pr3a)	20:45			19:24			18:05	15:59	15:37
20	04:52	20:46 (Pr3a)	05:51				06:53			07:54	08:01	08:45
	21:47	21	21:07 (Pr3a)	20:42			19:21			18:02	15:57	15:37
21	04:54	20:46 (Pr3a)	05:53				06:55			07:57	08:03	08:46
	21:45	21	21:07 (Pr3a)	20:40			19:18			18:00	15:56	15:37
22	04:56	20:46 (Pr3a)	05:55				06:57			07:59	08:05	08:46
	21:44	21	21:07 (Pr3a)	20:37			19:16			17:57	15:54	15:38
23	04:57	20:46 (Pr3a)	05:57				06:59			08:01	08:07	08:47
	21:42	19	21:05 (Pr3a)	20:35			19:13			17:55	15:53	15:38
24	04:59	20:47 (Pr3a)	05:59				07:01			08:03	08:09	08:47
	21:40	17	21:04 (Pr3a)	20:32			19:10			17:53	15:51	15:39
25	05:01	20:48 (Pr3a)	06:01				07:03			07:05	08:11	08:48
	21:39	15	21:03 (Pr3a)	20:30			19:08			16:50	15:50	15:39
26	05:03	20:48 (Pr3a)	06:03				07:05			07:07	08:13	08:48
	21:37	13	21:01 (Pr3a)	20:27			19:05			16:48	15:49	15:40
27	05:04	20:49 (Pr3a)	06:05				07:07			07:09	08:14	08:48
	21:35	11	21:00 (Pr3a)	20:25			19:02			16:45	15:48	15:41
28	05:06	20:51 (Pr3a)	06:07				07:09			07:12	08:16	08:48
	21:33	7	20:58 (Pr3a)	20:22			18:59			16:43	15:46	15:42
29	05:08	20:51 (Pr3a)	06:09				07:11			07:14	08:18	08:48
	21:31	5	20:56 (Pr3a)	20:20			18:57			16:41	15:45	15:43
30	05:10		06:11		19:18 (AP2)	07:13				07:16	08:20	08:48
	21:29		20:17	9	19:27 (AP2)	18:54				16:39	15:44	15:44
31	05:12		06:13		19:16 (AP2)					07:18		08:48
	21:27		20:14	13	19:29 (AP2)					16:36		15:45
Potential sun hours	529		469			384			324	248	217	
Total, worst case	487		22			145						
Sun reduction	0,47		0,52			0,43						
Oper. time red.	1,00		1,00			1,00						
Wind dir. red.	1,00		1,00			1,00						
Total reduction	0,47		0,52			0,43						
Total, real	230		11			63						

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Brieži i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (476)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:46	08:12 16:43	07:09 17:45	06:47 19:51	05:30 20:53	04:34 21:50	04:28 22:07	05:14 21:25	06:15 20:12	07:15 18:51	07:20 16:34	08:22 15:43
2	08:48 15:47	08:10 16:45	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:06	05:17 21:21	06:19 20:06	07:19 18:46	07:25 16:29	08:25 15:41
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	07:21 18:43	07:27 16:27	08:27 15:40
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:57	04:33 22:03	05:23 21:15	06:25 19:59	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:56	07:58 16:59	06:50 18:00	06:28 20:05	05:15 21:07	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:57	07:56 17:01	06:48 18:03	06:25 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51	07:31 18:30	07:38 16:17	08:34 15:37
10	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:31 21:06	06:33 19:48	07:33 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:25 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:06 21:15	04:25 22:03	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	07:44 16:11	08:38 15:36
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	05:04 21:17	04:24 22:03	04:41 21:57	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	05:02 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:17	07:48 16:07	08:40 15:36
15	08:39 16:08	07:43 17:14	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:44 21:54	05:41 20:54	06:43 19:34	07:44 18:15	07:50 16:06	08:41 15:36
16	08:38 16:10	07:40 17:17	06:29 18:17	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	07:53 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:23 22:06	04:47 21:51	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:23 22:06	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	07:57 16:00	08:44 15:36
19	08:34 16:16	07:33 17:23	06:21 18:24	06:00 20:28	04:53 21:29	04:23 22:07	04:50 21:49	05:49 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 15:36
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:51 21:31	04:23 22:07	04:52 21:47	05:51 20:42	06:53 19:21	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:23 22:08	04:54 21:45	05:53 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 15:37
22	08:30 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08	04:55 21:44	05:55 20:37	06:57 19:16	07:59 17:57	08:05 15:54	08:47 15:37
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	04:46 21:36	04:24 22:08	04:57 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:34	06:08 18:34	05:47 20:39	04:45 21:38	04:24 22:08	04:59 21:40	05:59 20:32	07:01 19:10	08:03 17:52	08:09 15:51	08:48 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:43 21:39	04:24 22:08	05:01 21:39	06:01 20:30	07:03 19:07	08:05 16:50	08:11 15:50	08:48 15:39
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	04:42 21:41	04:25 22:08	05:02 21:37	06:03 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:40
27	08:21 16:32	07:14 17:41	06:00 18:40	05:40 20:45	04:40 21:43	04:25 22:08	05:04 21:35	06:05 20:25	07:07 19:02	08:09 16:45	08:15 15:47	08:48 15:41
28	08:20 16:34	07:11 17:43	05:57 18:42	05:38 20:47	04:39 21:44	04:26 22:08	05:06 21:33	06:07 20:22	07:09 18:59	08:11 16:43	08:16 15:46	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 18:57	08:13 16:41	08:18 15:45	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:36 21:47	04:27 22:07	05:10 21:29	06:11 20:17	07:13 18:54	08:16 16:38	08:20 15:44	08:49 15:44
31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Briež udarzs - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (423)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January			February			March			April			May			June		
1	08:48		11:21 (DD3)	08:13		13:57 (DD1)	07:09		15:11 (O3)	06:47		17:31 (O2)	05:31		04:35			
	15:47	92	14:59 (O1.b)	16:44	49	15:44 (O4)	17:46	28	15:39 (O3)	19:51	44	18:15 (O2)	20:53		21:50			
2	08:48		11:22 (DD3)	08:11		14:03 (DD1)	07:06		15:13 (O3)	06:45		17:32 (O2)	05:29		04:34			
	15:48	91	15:00 (O1.b)	16:46	39	15:44 (O4)	17:48	23	15:36 (O3)	19:53	42	18:14 (O2)	20:55		21:52			
3	08:48		11:22 (DD3)	08:09		15:08 (O3)	07:04		15:17 (O3)	06:42		17:32 (O2)	05:27		04:33			
	15:50	91	15:00 (O1.b)	16:48	36	15:44 (O4)	17:50	16	15:33 (O3)	19:55	41	18:13 (O2)	20:57		21:53			
4	08:47		11:24 (DD3)	08:07		15:07 (O3)	07:01			06:39		17:33 (O2)	05:24		04:32			
	15:51	90	15:01 (O1.b)	16:51	37	15:44 (O4)	17:53			19:57	38	18:11 (O2)	20:59		21:54			
5	08:47		11:24 (DD3)	08:05		15:05 (O3)	06:59			06:37		17:35 (O2)	05:22		04:31			
	15:52	91	15:01 (O1.b)	16:53	39	15:44 (O3)	17:55			19:59	35	18:10 (O2)	21:02		21:55			
6	08:46		11:25 (DD3)	08:03		15:05 (O3)	06:56			06:34		17:36 (O2)	05:20		04:30			
	15:54	90	15:02 (O1.b)	16:55	40	15:45 (O3)	17:57			20:02	31	18:07 (O2)	21:04		21:57			
7	08:46		11:25 (DD3)	08:01		15:04 (O3)	06:54			06:31		17:39 (O2)	05:18		04:29			
	15:55	90	15:02 (O1.b)	16:57	42	15:46 (O3)	17:59			20:04	26	18:05 (O2)	21:06		21:58			
8	08:45		11:26 (DD3)	07:58		15:04 (O3)	06:51			06:29		17:41 (O2)	05:16		04:28			
	15:57	91	15:03 (O1.b)	17:00	44	15:48 (O3)	18:01			20:06	21	18:02 (O2)	21:08		21:59			
9	08:44		11:27 (DD3)	07:56		15:03 (O3)	06:48		16:51 (O2)	06:26		17:45 (O2)	05:14		04:28			
	15:58	88	15:03 (O1.b)	17:02	45	15:48 (O3)	18:03	16	17:07 (O2)	20:08	12	17:57 (O2)	21:10		22:00			
10	08:44		11:29 (DD3)	07:54		15:03 (O3)	06:46			16:47 (O2)	06:23		05:11		04:27			
	16:00	86	15:03 (O1.b)	17:04	45	15:48 (O3)	18:05	23	17:10 (O2)	20:10			21:12		22:01			
11	08:43		11:30 (DD3)	07:52		15:02 (O3)	06:43			16:44 (O2)	06:21		05:09		04:26			
	16:02	85	15:04 (O1.b)	17:06	46	15:48 (O3)	18:07	28	17:12 (O2)	20:12			21:14		22:02			
12	08:42		11:32 (DD3)	07:50		15:02 (O3)	06:40			16:42 (O2)	06:18		05:07		04:26			
	16:03	82	15:04 (O1.b)	17:09	47	15:49 (O3)	18:10	33	17:15 (O2)	20:14			21:16		22:03			
13	08:41		11:34 (DD3)	07:48		15:02 (O3)	06:38			16:40 (O2)	06:16		05:05		04:25			
	16:05	80	15:05 (O1.b)	17:11	48	15:50 (O3)	18:12	36	17:16 (O2)	20:16			21:17		22:03			
14	08:40		11:35 (DD3)	07:45		15:01 (O3)	06:35			16:38 (O2)	06:13		05:03		04:25			
	16:07	76	15:05 (O1.b)	17:13	49	15:50 (O3)	18:14	39	17:17 (O2)	20:18			21:19		22:04			
15	08:39		11:39 (DD3)	07:43		15:01 (O3)	06:33			16:37 (O2)	06:11		05:01		04:25			
	16:09	70	15:05 (O1.b)	17:15	49	15:50 (O3)	18:16	42	17:19 (O2)	20:20			21:21		22:05			
16	08:38		13:40 (DD1)	07:41		15:01 (O3)	06:30			16:35 (O2)	06:08		05:00		04:25			
	16:11	63	15:06 (O1.b)	17:17	49	15:50 (O3)	18:18	44	17:19 (O2)	20:22			21:23		22:05			
17	08:36		13:40 (DD1)	07:38		15:01 (O3)	06:27			16:34 (O2)	06:05		04:58		04:24			
	16:13	69	15:30 (O4)	17:20	49	15:50 (O3)	18:20	45	17:19 (O2)	20:24			21:25		22:06			
18	08:35		13:41 (DD1)	07:36		15:01 (O3)	06:25			16:34 (O2)	06:03		04:56		04:24			
	16:15	72	15:33 (O4)	17:22	48	15:49 (O3)	18:22	47	17:21 (O2)	20:26			21:27		22:06			
19	08:34		13:41 (DD1)	07:34		15:02 (O3)	06:22			16:32 (O2)	06:00		04:54		04:24			
	16:17	74	15:34 (O4)	17:24	48	15:50 (O3)	18:24	49	17:21 (O2)	20:28			21:29		22:07			
20	08:33		13:42 (DD1)	07:31		15:01 (O3)	06:19			16:31 (O2)	05:58		04:52		04:24			
	16:19	75	15:36 (O4)	17:26	48	15:49 (O3)	18:26	49	17:20 (O2)	20:31			21:31		22:07			
21	08:31		13:43 (DD1)	07:29		15:02 (O3)	06:17			16:31 (O2)	05:55		04:51		04:24			
	16:21	74	15:38 (O4)	17:29	47	15:49 (O3)	18:28	50	17:21 (O2)	20:33			21:32		22:07			
22	08:30		13:43 (DD1)	07:26		15:02 (O3)	06:14			16:30 (O2)	05:53		04:49		04:25			
	16:23	73	15:39 (O4)	17:31	46	15:48 (O3)	18:30	51	17:21 (O2)	20:35			21:34		22:08			
23	08:28		13:44 (DD1)	07:24		15:04 (O3)	06:11			16:30 (O2)	05:50		04:47		04:25			
	16:25	68	15:39 (O4)	17:33	44	15:48 (O3)	18:33	51	17:21 (O2)	20:37			21:36		22:08			
24	08:27		13:45 (DD1)	07:21		15:04 (O3)	06:09			16:30 (O2)	05:48		04:46		04:25			
	16:27	60	15:40 (O4)	17:35	42	15:46 (O3)	18:35	51	17:21 (O2)	20:39			21:38		22:08			
25	08:25		13:45 (DD1)	07:19		15:05 (O3)	06:06			16:29 (O2)	05:45		04:44		04:26			
	16:29	61	15:41 (O4)	17:37	41	15:46 (O3)	18:37	51	17:20 (O2)	20:41			21:39		22:08			
26	08:23		13:46 (DD1)	07:16		15:06 (O3)	06:03			16:29 (O2)	05:43		04:43		04:26			
	16:31	59	15:41 (O4)	17:39	38	15:44 (O3)	18:39	51	17:20 (O2)	20:43			21:41		22:08			
27	08:22		13:47 (DD1)	07:14		15:07 (O3)	06:01			16:29 (O2)	05:41		04:41		04:26			
	16:33	60	15:42 (O4)	17:42	35	15:42 (O3)	18:41	50	17:19 (O2)	20:45			21:43		22:08			
28	08:20		13:49 (DD1)	07:11		15:09 (O3)	05:58			16:29 (O2)	05:38		04:40		04:27			
	16:35	57	15:42 (O4)	17:44	32	15:41 (O3)	18:43	50	17:19 (O2)	20:47			21:44		22:08			
29	08:18		13:50 (DD1)				06:55			17:29 (O2)	05:36		04:39		04:28			
	16:37	56	15:43 (O4)				19:45	49	18:18 (O2)	20:49			21:46		22:07			
30	08:16		13:52 (DD1)				06:53			17:29 (O2)	05:34		04:37		04:28			
	16:40	54	15:43 (O4)				19:47	48	18:17 (O2)	20:51			21:47		22:07			
31	08:14		13:54 (DD1)				06:50			17:30 (O2)			04:36					
	16:42	52	15:43 (O4)				19:49	46	18:16 (O2)				21:49					
Potential sun hours	236			266			366			426			507			528		
Total, worst case	2320			1222			1066			290								
Sun reduction	0,13			0,22			0,39			0,44								
Oper. time red.	1,00			1,00			1,00			1,00								
Wind dir. red.	1,00			1,00			1,00			1,00								
Total reduction	0,13			0,22			0,39			0,44								
Total, real	311			275			417			128								

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Briež udarzs - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (423)  
 Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December				
1	04:29 22:07	05:15 21:26	06:16 20:12	07:16 18:52	17:20 (O2) 17:55 (O2)	07:21 16:35	14:32 (O3) 15:18 (O3)	08:22 15:44	11:12 (DD3) 14:46 (O1.b)	
2	04:30 22:06	05:16 21:24	06:18 20:09	07:18 18:49	17:22 (O2) 17:52 (O2)	07:23 16:32	14:32 (O3) 15:17 (O3)	08:24 15:43	11:12 (DD3) 14:47 (O1.b)	
3	04:31 22:06	05:18 21:22	06:20 20:07	17:43 (O2) 17:55 (O2)	07:20 18:47	17:24 (O2) 17:50 (O2)	07:25 16:30	14:34 (O3) 15:17 (O3)	08:25 15:42	11:12 (DD3) 14:47 (O1.b)
4	04:32 22:05	05:20 21:19	06:22 20:04	17:38 (O2) 17:59 (O2)	07:22 18:44	17:26 (O2) 17:46 (O2)	07:27 16:28	14:34 (O3) 15:16 (O3)	08:27 15:41	11:12 (DD3) 14:48 (O1.b)
5	04:33 22:04	05:22 21:17	06:24 20:02	17:35 (O2) 18:01 (O2)	07:24 18:41	17:31 (O2) 17:41 (O2)	07:29 16:26	14:34 (O3) 15:15 (O3)	08:28 15:41	11:11 (DD3) 14:47 (O1.b)
6	04:34 22:04	05:24 21:15	06:26 19:59	17:33 (O2) 18:03 (O2)	07:26 18:39	07:31 16:24	14:36 (O3) 15:15 (O3)	08:30 15:40	11:11 (DD3) 14:48 (O1.b)	
7	04:35 22:03	05:26 21:13	06:28 19:56	17:30 (O2) 18:05 (O2)	07:28 18:36	07:34 16:22	14:37 (O3) 15:14 (O4)	08:31 15:39	11:11 (DD3) 14:48 (O1.b)	
8	04:36 22:02	05:28 21:11	06:30 19:54	17:28 (O2) 18:06 (O2)	07:30 18:34	07:36 16:20	14:38 (O3) 15:14 (O4)	08:33 15:39	11:11 (DD3) 14:48 (O1.b)	
9	04:37 22:01	05:30 21:09	06:32 19:51	17:27 (O2) 18:07 (O2)	07:32 18:31	07:38 16:18	13:33 (DD1) 15:15 (O4)	08:34 15:38	11:11 (DD3) 14:49 (O1.b)	
10	04:38 22:00	05:32 21:06	06:34 19:48	17:25 (O2) 18:07 (O2)	07:34 18:28	07:40 16:04 (O3)	13:28 (DD1) 15:15 (O4)	08:36 15:38	11:11 (DD3) 14:49 (O1.b)	
11	04:40 21:59	05:34 21:04	06:36 19:46	17:23 (O2) 18:07 (O2)	07:36 18:26	07:42 16:09 (O3)	13:26 (DD1) 15:15 (O4)	08:37 15:37	11:12 (DD3) 14:50 (O1.b)	
12	04:41 21:58	05:36 21:02	06:38 19:43	17:22 (O2) 18:08 (O2)	07:38 18:23	07:44 16:11 (O3)	13:24 (DD1) 15:15 (O4)	08:38 15:37	11:12 (DD3) 14:50 (O1.b)	
13	04:42 21:57	05:38 20:59	06:40 19:40	17:21 (O2) 18:08 (O2)	07:40 18:21	07:46 16:13 (O3)	13:22 (DD1) 15:15 (O4)	08:39 15:37	11:12 (DD3) 14:50 (O1.b)	
14	04:44 21:55	05:40 20:57	06:42 19:38	17:20 (O2) 18:08 (O2)	07:42 18:18	07:49 16:14 (O3)	13:22 (DD1) 15:15 (O4)	08:40 15:37	11:12 (DD3) 14:50 (O1.b)	
15	04:45 21:54	05:42 20:55	06:44 19:35	17:19 (O2) 18:08 (O2)	07:44 18:15	07:51 16:16 (O3)	13:20 (DD1) 15:15 (O4)	08:41 15:37	11:12 (DD3) 14:50 (O1.b)	
16	04:47 21:53	05:44 20:52	06:46 19:32	17:18 (O2) 18:08 (O2)	07:46 18:13	07:53 16:17 (O3)	13:19 (DD1) 15:14 (O4)	08:42 15:37	11:13 (DD3) 14:51 (O1.b)	
17	04:48 21:52	05:46 20:50	06:48 19:30	17:18 (O2) 18:08 (O2)	07:48 18:10	07:55 16:17 (O3)	13:19 (DD1) 15:15 (O4)	08:43 15:37	11:13 (DD3) 14:51 (O1.b)	
18	04:50 21:50	05:48 20:48	06:50 19:27	17:17 (O2) 18:08 (O2)	07:51 18:08	07:57 16:18 (O3)	13:19 (DD1) 15:14 (O4)	08:44 15:37	11:14 (DD3) 14:52 (O1.b)	
19	04:51 21:49	05:50 20:45	06:52 19:24	17:17 (O2) 18:08 (O2)	07:53 18:05	07:59 16:19 (O3)	13:18 (DD1) 15:13 (O4)	08:45 15:37	11:14 (DD3) 14:52 (O1.b)	
20	04:53 21:47	05:52 20:43	06:54 19:21	17:16 (O2) 18:07 (O2)	07:55 18:03	08:01 16:19 (O3)	13:18 (DD1) 15:14 (O4)	08:45 15:38	11:14 (DD3) 14:52 (O1.b)	
21	04:55 21:46	05:54 20:40	06:56 19:19	17:16 (O2) 18:07 (O2)	07:57 18:00	08:03 16:19 (O3)	13:18 (DD1) 15:13 (O4)	08:46 15:38	11:15 (DD3) 14:53 (O1.b)	
22	04:56 21:44	05:56 20:38	06:58 19:16	17:16 (O2) 18:06 (O2)	07:59 17:58	08:05 16:19 (O3)	13:18 (DD1) 15:12 (O4)	08:47 15:38	11:16 (DD3) 14:54 (O1.b)	
23	04:58 21:42	05:58 20:35	06:59 19:13	17:16 (O2) 18:05 (O2)	08:01 17:56	08:07 16:20 (O3)	13:19 (DD1) 15:11 (O4)	08:47 15:39	11:16 (DD3) 14:54 (O1.b)	
24	05:00 21:41	06:00 20:33	07:01 19:11	17:16 (O2) 18:05 (O2)	08:03 17:53	08:09 16:20 (O3)	13:18 (DD1) 15:10 (O4)	08:48 15:40	11:16 (DD3) 14:54 (O1.b)	
25	05:02 21:39	06:02 20:30	07:03 19:08	17:16 (O2) 18:04 (O2)	07:05 16:51	08:11 15:19 (O3)	13:18 (DD1) 15:08 (O4)	08:48 15:40	11:17 (DD3) 14:54 (O1.b)	
26	05:03 21:37	06:04 20:28	07:05 19:05	17:16 (O2) 18:03 (O2)	07:08 16:48	08:13 15:20 (O3)	13:18 (DD1) 14:44 (O1.b)	08:48 15:41	11:18 (DD3) 14:56 (O1.b)	
27	05:05 21:35	06:06 20:25	07:07 19:03	17:17 (O2) 18:01 (O2)	07:10 16:46	08:15 15:19 (O3)	11:18 (DD3) 14:44 (O1.b)	08:48 15:42	11:18 (DD3) 14:56 (O1.b)	
28	05:07 21:33	06:08 20:22	07:09 19:00	17:17 (O2) 18:00 (O2)	07:12 16:44	08:17 15:19 (O3)	11:15 (DD3) 14:45 (O1.b)	08:49 15:43	11:19 (DD3) 14:57 (O1.b)	
29	05:09 21:32	06:10 20:20	07:12 18:57	17:18 (O2) 17:58 (O2)	07:14 16:41	08:18 15:19 (O3)	11:14 (DD3) 14:45 (O1.b)	08:49 15:44	11:19 (DD3) 14:57 (O1.b)	
30	05:11 21:30	06:12 20:17	07:14 18:55	17:19 (O2) 17:57 (O2)	07:16 16:39	08:20 15:19 (O3)	11:13 (DD3) 14:46 (O1.b)	08:49 15:45	11:20 (DD3) 14:58 (O1.b)	
31	05:13 21:28	06:14 20:15		07:18 16:37	07:18 15:18 (O3)			08:49 15:46	11:20 (DD3) 14:58 (O1.b)	
Potential sun hours	528	469	384	324	248	217				
Total, worst case			1190	1017	1756	2873				
Sun reduction			0,43	0,29	0,08	0,08				
Oper. time red.			1,00	1,00	1,00	1,00				
Wind dir. red.			1,00	1,00	1,00	1,00				
Total reduction			0,43	0,29	0,08	0,08				
Total, real			514	295	132	242				

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Bruveri - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (434)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:13 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:07	05:14 21:26	06:16 20:12	07:15 18:52	07:21 16:35	08:22 15:44
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:34 21:52	04:30 22:06	05:16 21:24	06:18 20:09	07:18 18:49	07:23 16:32	08:24 15:43
3	08:48 15:49	08:09 16:48	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:06	05:18 21:22	06:20 20:07	07:20 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:51	07:01 17:52	06:39 19:57	05:24 20:59	04:32 21:54	04:32 22:05	05:20 21:20	06:22 20:04	07:22 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:53	06:59 17:55	06:36 19:59	05:22 21:02	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:02	07:24 18:41	07:29 16:26	08:28 15:40
6	08:47 15:54	08:03 16:55	06:56 17:57	06:34 20:02	05:20 21:04	04:30 21:57	04:34 22:04	05:24 21:15	06:26 20:00	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:55	08:01 16:57	06:53 17:59	06:31 20:04	05:18 21:06	04:29 21:58	04:35 22:03	05:26 21:13	06:28 20:00	07:28 18:36	07:34 16:22	08:31 15:39
8	08:45 15:57	07:58 16:59	06:51 18:01	06:29 20:06	05:16 21:08	04:28 21:59	04:36 22:02	05:28 21:11	06:30 20:04	07:30 18:33	07:36 16:20	08:33 15:39
9	08:45 15:58	07:56 17:02	06:48 18:03	06:26 20:08	05:13 21:10	04:27 22:00	04:37 22:01	05:30 21:09	06:32 20:00	07:32 18:31	07:38 16:18	08:34 15:38
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:12	04:27 22:01	04:38 22:00	05:32 21:06	06:34 20:00	07:34 18:28	07:40 16:16	08:36 15:38
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:14	04:26 22:02	04:40 21:59	05:34 21:04	06:36 20:00	07:36 18:26	07:42 16:14	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:16	04:26 22:03	04:41 21:58	05:36 21:02	06:38 20:00	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:48 17:11	06:38 18:12	06:16 20:16	05:05 21:18	04:25 22:04	04:42 21:57	05:38 20:59	06:40 20:00	07:40 18:20	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:19	04:25 22:04	04:44 21:56	05:40 20:57	06:42 20:00	07:42 18:18	07:49 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:25 22:05	04:45 21:54	05:42 20:55	06:44 20:00	07:44 18:15	07:51 16:06	08:41 15:37
16	08:38 16:11	07:41 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:06	04:47 21:53	05:44 20:52	06:46 20:00	07:46 18:13	07:53 16:04	08:42 15:37
17	08:37 16:12	07:38 17:20	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:52	05:46 20:50	06:48 20:00	07:48 18:10	07:55 16:03	08:43 15:37
18	08:35 16:14	07:36 17:22	06:24 18:22	06:03 20:26	04:56 21:27	04:24 22:07	04:50 21:50	05:48 20:48	06:49 20:00	07:51 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:34 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:49	05:50 20:45	06:51 20:00	07:53 18:05	07:59 15:59	08:45 15:37
20	08:33 16:18	07:31 17:26	06:19 18:26	05:58 20:31	04:52 21:31	04:24 22:07	04:53 21:47	05:52 20:43	06:53 20:00	07:55 18:03	08:01 15:58	08:46 15:37
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:33	04:50 21:32	04:24 22:08	04:55 21:46	05:54 20:40	06:55 20:00	07:57 18:00	08:03 15:56	08:46 15:38
22	08:30 16:22	07:26 17:31	06:14 18:30	05:53 20:35	04:49 21:34	04:24 22:08	04:56 21:44	05:56 20:38	06:57 20:00	07:59 18:00	08:05 15:55	08:47 15:38
23	08:28 16:25	07:24 17:33	06:11 18:33	05:50 20:37	04:47 21:36	04:25 22:08	04:58 21:42	05:58 20:35	06:59 20:00	08:01 18:00	08:07 15:53	08:47 15:39
24	08:27 16:27	07:21 17:35	06:08 18:35	05:48 20:39	04:46 21:38	04:25 22:08	05:00 21:41	06:00 20:33	07:01 20:00	08:03 18:00	08:09 15:52	08:48 15:39
25	08:25 16:29	07:19 17:37	06:06 18:37	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:02 20:30	07:03 20:00	08:05 18:00	08:11 15:51	08:48 15:40
26	08:23 16:31	07:16 17:39	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:03 21:37	06:04 20:28	07:05 20:00	08:08 18:00	08:13 15:49	08:48 15:41
27	08:22 16:33	07:14 17:42	06:00 18:41	05:41 20:45	04:41 21:43	04:26 22:08	05:05 21:35	06:06 20:25	07:07 20:00	08:10 18:00	08:15 15:48	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:08	05:07 21:33	06:08 20:22	07:09 20:00	08:12 18:00	08:17 15:47	08:49 15:42
29	08:18 16:37		06:55 19:45	05:36 20:49	04:38 21:46	04:27 22:07	05:09 21:32	06:10 20:20	07:11 20:00	08:14 18:00	08:18 15:46	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:11 21:30	06:12 20:17	07:13 20:00	08:16 18:00	08:20 15:45	08:49 15:44
31	08:15 16:42		06:50 19:49		04:36 21:49		05:12 21:28	06:14 20:15	07:18 20:00	08:18 18:00		08:49 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Bucinieki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (573)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:09 16:48	07:04 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:07	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:07 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:34 20:01	05:19 21:03	04:29 21:57	04:33 22:03	05:24 21:15	06:25 20:01	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:26 21:13	06:27 20:01	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:28 21:11	06:29 20:01	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:37 22:01	05:29 21:08	06:31 20:01	07:32 18:30	07:38 16:17	08:34 15:38
10	08:44 15:59	07:54 17:04	06:45 18:05	06:23 20:10	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 20:01	07:34 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 20:01	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:03	04:40 21:58	05:35 21:02	06:37 20:01	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:57	05:37 20:59	06:39 20:01	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:13	06:35 18:13	06:13 20:18	05:03 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 20:01	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:55	06:43 20:01	07:44 18:15	07:50 16:06	08:41 15:36
16	08:38 16:10	07:40 17:17	06:30 18:18	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 20:01	07:46 18:12	07:53 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 20:01	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 20:01	07:50 18:07	07:57 16:01	08:44 15:36
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	04:53 21:29	04:24 22:07	04:51 21:49	05:49 20:45	06:51 20:01	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:31	04:24 22:07	04:52 21:47	05:51 20:42	06:53 20:01	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 20:01	07:57 18:00	08:03 15:56	08:46 15:37
22	08:30 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 20:01	07:59 17:58	08:05 15:54	08:47 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:37	04:47 21:36	04:24 22:08	04:58 21:42	05:57 20:35	06:59 20:01	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:38	04:24 22:08	04:59 21:40	05:59 20:32	07:01 20:01	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 20:01	08:05 17:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 20:01	08:07 17:48	08:13 15:49	08:48 15:40
27	08:21 16:33	07:14 17:41	06:00 18:41	05:40 20:45	04:41 21:43	04:26 22:08	05:05 21:35	06:05 20:25	07:07 20:01	08:09 17:46	08:15 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:57 18:43	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	07:09 20:01	08:12 17:43	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 20:01	08:14 17:41	08:18 15:45	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 20:01	08:16 17:39	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14	07:18 20:01	08:18 17:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Burtnieki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (566)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:07	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:24 21:15	06:25 20:01	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:26 21:13	06:27 20:01	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:27 21:11	06:29 20:01	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:37 22:01	05:29 21:08	06:31 20:01	07:31 18:30	07:38 16:17	08:34 15:38
10	08:43 15:59	07:54 17:04	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 20:01	07:34 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 20:01	07:36 18:25	07:42 16:13	08:37 15:37
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17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 20:01	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 20:01	07:50 18:07	07:57 16:01	08:44 15:36
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22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 20:01	07:59 17:58	08:05 15:54	08:46 15:38
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24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:24 22:08	04:59 21:40	05:59 20:32	07:01 20:01	08:03 17:53	08:09 15:52	08:47 15:39
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26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 20:01	08:07 17:48	08:13 15:49	08:48 15:40
27	08:21 16:33	07:14 17:41	06:00 18:40	05:40 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:05 20:25	07:07 20:01	08:09 17:46	08:14 15:48	08:48 15:41
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31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14	07:18 20:01	08:18 17:36		08:48 15:45
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Wind dir. red.												
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	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Berzainites - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (591)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	January			February			March			April			May			June	
1	08:48	12:50 (DD3)	08:13	12:52 (DD3)	07:09	16:10 (DD1)	06:47	18:34 (O3)	05:31	19:33 (O2)	04:35						
	15:47	72 14:50 (O5)	16:44	93 15:14 (O5)	17:46	59 17:14 (O4)	19:51	31 19:05 (O3)	20:53	33 20:06 (O2)	21:50						
2	08:48	12:51 (DD3)	08:11	12:53 (DD3)	07:06	16:08 (DD1)	06:45	18:33 (O3)	05:29	19:33 (O2)	04:34						
	15:48	76 14:53 (O5)	16:46	91 15:14 (O5)	17:48	64 17:15 (O4)	19:53	34 19:07 (O3)	20:55	34 20:07 (O2)	21:51						
3	08:48	12:50 (DD3)	08:09	12:53 (DD3)	07:04	16:08 (DD1)	06:42	18:31 (O3)	05:27	19:32 (O2)	04:33						
	15:50	79 14:54 (O5)	16:48	89 15:13 (O5)	17:50	66 17:16 (O4)	19:55	36 19:07 (O3)	20:57	35 20:07 (O2)	21:53						
4	08:47	12:51 (DD3)	08:07	12:54 (DD3)	07:01	16:07 (DD1)	06:39	18:30 (O3)	05:24	19:32 (O2)	04:32						
	15:51	81 14:56 (O5)	16:51	86 15:13 (O5)	17:52	70 17:17 (O4)	19:57	37 19:07 (O3)	20:59	36 20:08 (O2)	21:54						
5	08:47	12:51 (DD3)	08:05	12:54 (DD3)	06:59	16:06 (DD1)	06:37	18:29 (O3)	05:22	19:32 (O2)	04:31						
	15:52	84 14:58 (O5)	16:53	83 15:11 (O5)	17:55	71 17:17 (O4)	19:59	39 19:08 (O3)	21:01	36 20:08 (O2)	21:55						
6	08:46	12:50 (DD3)	08:03	12:54 (DD3)	06:56	16:06 (DD1)	06:34	18:28 (O3)	05:20	19:31 (O2)	04:30						
	15:54	87 14:59 (O5)	16:55	89 16:22 (O1.b)	17:57	72 17:18 (O4)	20:02	40 19:08 (O3)	21:04	36 20:07 (O2)	21:57						
7	08:46	12:50 (DD3)	08:01	12:55 (DD3)	06:53	16:06 (DD1)	06:31	18:27 (O3)	05:18	19:30 (O2)	04:29						
	15:55	89 15:00 (O5)	16:57	86 16:24 (O1.b)	17:59	71 17:17 (O4)	20:04	41 19:08 (O3)	21:06	37 20:07 (O2)	21:58						
8	08:45	12:50 (DD3)	07:58	12:55 (DD3)	06:51	16:06 (DD1)	06:29	18:27 (O3)	05:16	19:31 (O2)	04:28						
	15:57	89 15:01 (O5)	17:00	82 16:26 (O1.b)	18:01	72 17:18 (O4)	20:06	42 19:09 (O3)	21:08	37 20:08 (O2)	21:59						
9	08:44	12:50 (DD3)	07:56	12:57 (DD3)	06:48	16:06 (DD1)	06:26	18:26 (O3)	05:14	19:31 (O2)	04:28						
	15:58	90 15:02 (O5)	17:02	73 16:28 (O1.b)	18:03	71 17:17 (O4)	20:08	42 19:08 (O3)	21:10	37 20:08 (O2)	22:00						
10	08:44	12:50 (DD3)	07:54	12:58 (DD3)	06:46	16:05 (DD1)	06:23	18:26 (O3)	05:11	19:31 (O2)	04:27						
	16:00	92 15:04 (O5)	17:04	75 16:30 (O1.b)	18:05	71 17:16 (O4)	20:10	43 19:09 (O3)	21:12	36 20:07 (O2)	22:01						
11	08:43	12:50 (DD3)	07:52	12:58 (DD3)	06:43	16:05 (DD1)	06:21	18:25 (O3)	05:09	19:31 (O2)	04:26						
	16:02	93 15:05 (O5)	17:06	75 16:30 (O1.b)	18:07	70 17:15 (O4)	20:12	43 19:08 (O3)	21:14	36 20:07 (O2)	22:02						
12	08:42	12:51 (DD3)	07:50	13:00 (DD3)	06:40	16:06 (DD1)	06:18	18:26 (O3)	05:07	19:31 (O2)	04:26						
	16:03	93 15:06 (O5)	17:09	72 16:30 (O1.b)	18:10	68 17:15 (O4)	20:14	42 19:08 (O3)	21:15	36 20:07 (O2)	22:03						
13	08:41	12:51 (DD3)	07:47	13:01 (DD3)	06:38	16:06 (DD1)	06:16	18:25 (O3)	05:05	19:31 (O2)	04:26						
	16:05	93 15:07 (O5)	17:11	71 16:31 (O1.b)	18:12	65 17:13 (O4)	20:16	42 19:07 (O3)	21:17	35 20:06 (O2)	22:03						
14	08:40	12:50 (DD3)	07:45	13:02 (DD3)	06:35	16:06 (DD1)	06:13	18:26 (O3)	05:03	19:32 (O2)	04:25						
	16:07	95 15:08 (O5)	17:13	68 16:31 (O1.b)	18:14	61 17:11 (O4)	20:18	41 19:07 (O3)	21:19	33 20:05 (O2)	22:04						
15	08:39	12:51 (DD3)	07:43	13:04 (DD3)	06:32	16:07 (DD1)	06:10	18:25 (O3)	05:01	19:33 (O2)	04:25						
	16:09	93 15:09 (O5)	17:15	65 16:31 (O1.b)	18:16	56 17:09 (O4)	20:20	41 19:06 (O3)	21:21	33 20:06 (O2)	22:05						
16	08:38	12:51 (DD3)	07:41	13:06 (DD3)	06:30	16:08 (DD1)	06:08	18:26 (O3)	05:00	19:33 (O2)	04:25						
	16:11	87 15:10 (O5)	17:17	60 16:30 (O1.b)	18:18	47 17:06 (O4)	20:22	40 19:06 (O3)	21:23	32 20:05 (O2)	22:05						
17	08:36	12:50 (DD3)	07:38	13:09 (DD3)	06:27	16:08 (DD1)	06:05	18:26 (O3)	04:58	19:33 (O2)	04:24						
	16:13	89 15:10 (O5)	17:20	54 16:30 (O1.b)	18:20	37 16:45 (DD1)	20:24	38 19:04 (O3)	21:25	31 20:04 (O2)	22:06						
18	08:35	12:50 (DD3)	07:36	13:11 (DD3)	06:25	16:10 (DD1)	06:03	18:27 (O3)	04:56	19:35 (O2)	04:24						
	16:15	91 15:11 (O5)	17:22	48 16:29 (O1.b)	18:22	34 16:44 (DD1)	20:26	37 19:04 (O3)	21:27	29 20:04 (O2)	22:06						
19	08:34	12:51 (DD3)	07:34	13:16 (DD3)	06:22	16:11 (DD1)	06:00	18:27 (O3)	04:54	19:35 (O2)	04:24						
	16:17	91 15:12 (O5)	17:24	38 16:29 (O1.b)	18:24	31 16:42 (DD1)	20:28	35 19:02 (O3)	21:29	28 20:03 (O2)	22:07						
20	08:33	12:50 (DD3)	07:31	16:10 (O1.b)	06:19	16:13 (DD1)	05:58	18:28 (O3)	04:52	19:36 (O2)	04:24						
	16:19	92 15:12 (O5)	17:26	17 16:27 (O1.b)	18:26	26 16:39 (DD1)	20:31	33 19:01 (O3)	21:31	27 20:03 (O2)	22:07						
21	08:31	12:51 (DD3)	07:29	16:12 (O1.b)	06:17	16:16 (DD1)	05:55	18:30 (O3)	04:51	19:37 (O2)	04:24						
	16:21	94 15:13 (O5)	17:29	14 16:26 (O1.b)	18:28	21 16:37 (DD1)	20:33	30 19:00 (O3)	21:32	24 20:01 (O2)	22:07						
22	08:30	12:51 (DD3)	07:26	16:15 (O1.b)	06:14	16:19 (DD1)	05:53	18:31 (O3)	04:49	19:39 (O2)	04:25						
	16:23	95 15:14 (O5)	17:31	22 16:38 (DD1)	18:30	14 16:33 (DD1)	20:35	27 18:58 (O3)	21:34	22 20:01 (O2)	22:08						
23	08:28	12:51 (DD3)	07:24	16:20 (DD1)	06:11		05:50	18:33 (O3)	04:47	19:39 (O2)	04:25						
	16:25	95 15:14 (O5)	17:33	22 16:42 (DD1)	18:33		20:37	24 18:57 (O3)	21:36	20 19:59 (O2)	22:08						
24	08:27	12:51 (DD3)	07:21	16:17 (DD1)	06:09		05:48	18:35 (O3)	04:46	19:41 (O2)	04:25						
	16:27	96 15:14 (O5)	17:35	27 16:44 (DD1)	18:35		20:39	31 19:57 (O2)	21:38	17 19:58 (O2)	22:08						
25	08:25	12:51 (DD3)	07:19	16:16 (DD1)	06:06		05:45	18:38 (O3)	04:44	19:43 (O2)	04:26						
	16:29	96 15:14 (O5)	17:37	30 16:46 (DD1)	18:37		20:41	30 19:59 (O2)	21:39	14 19:57 (O2)	22:08						
26	08:23	12:51 (DD3)	07:16	16:14 (DD1)	06:03		05:43	19:39 (O2)	04:43	19:45 (O2)	04:26						
	16:31	95 15:14 (O5)	17:39	33 16:47 (DD1)	18:39		20:43	23 20:02 (O2)	21:41	9 19:54 (O2)	22:08						
27	08:22	12:51 (DD3)	07:14	16:12 (DD1)	06:00		05:41	19:38 (O2)	04:41		04:26						
	16:33	96 15:14 (O5)	17:42	44 17:09 (O4)	18:41		20:45	25 20:03 (O2)	21:43		22:08						
28	08:20	12:51 (DD3)	07:11	16:11 (DD1)	05:58		05:38	19:36 (O2)	04:40		04:27						
	16:35	97 15:15 (O5)	17:44	53 17:12 (O4)	18:43	7	17:55 (O3)	28 20:04 (O2)	21:44		22:07						
29	08:18	12:51 (DD3)			06:55		18:42 (O3)	05:36	19:35 (O2)	04:39	04:28						
	16:37	95 15:14 (O5)			19:45	17	18:59 (O3)	20:49	30 20:05 (O2)	21:46	22:07						
30	08:16	12:51 (DD3)			06:52		18:38 (O3)	05:34	19:34 (O2)	04:37	04:28						
	16:40	95 15:14 (O5)			19:47	24	19:02 (O3)	20:51	32 20:06 (O2)	21:47	22:07						
31	08:14	12:52 (DD3)			06:50		18:36 (O3)			04:36							
	16:42	93 15:14 (O5)			19:49	28	19:04 (O3)			21:49							
Potential sun hours	236		266		366		426		507		528						
Total, worst case	2803		1660		1293		1057		783								
Sun reduction	0,13		0,22		0,39		0,44		0,56								
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	0,13		0,22		0,39		0,44		0,56								
Total, real	376		373		506		467		441								

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Berzainites - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (591)  
Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	July			August			September			October			November			December		
1	04:29		05:15	19:42 (O2)	06:16	18:24 (O3)	07:16	16:45 (DD1)	07:21	12:27 (DD3)	08:22	12:32 (DD3)						
	22:06		21:26	35	20:17 (O2)	20:12	43	19:07 (O3)	18:52	17:53 (O4)	16:35	75	15:59 (O1.b)	15:44	93	14:47 (O5)		
2	04:30		05:16	19:42 (O2)	06:18	18:24 (O3)	07:18	16:44 (DD1)	07:23	12:26 (DD3)	08:24	12:33 (DD3)						
	22:06		21:24	35	20:17 (O2)	20:09	43	19:07 (O3)	18:49	17:54 (O4)	16:32	74	15:58 (O1.b)	15:43	92	14:47 (O5)		
3	04:31		05:18	19:41 (O2)	06:20	18:24 (O3)	07:20	16:43 (DD1)	07:25	12:25 (DD3)	08:25	12:34 (DD3)						
	22:05		21:22	37	20:18 (O2)	20:07	42	19:06 (O3)	18:47	17:54 (O4)	16:30	83	15:56 (O1.b)	15:42	91	14:47 (O5)		
4	04:32		05:20	19:41 (O2)	06:22	18:24 (O3)	07:22	16:43 (DD1)	07:27	12:25 (DD3)	08:27	12:35 (DD3)						
	22:05		21:19	36	20:17 (O2)	20:04	42	19:06 (O3)	18:44	17:54 (O4)	16:28	87	15:54 (O1.b)	15:41	90	14:46 (O5)		
5	04:33		05:22	19:41 (O2)	06:24	18:24 (O3)	07:24	16:42 (DD1)	07:29	12:24 (DD3)	08:28	12:35 (DD3)						
	22:04		21:17	36	20:17 (O2)	20:02	41	19:05 (O3)	18:41	17:54 (O4)	16:26	86	15:51 (O1.b)	15:41	89	14:45 (O5)		
6	04:34		05:24	19:41 (O2)	06:26	18:24 (O3)	07:26	16:42 (DD1)	07:31	12:24 (DD3)	08:30	12:37 (DD3)						
	22:03		21:15	36	20:17 (O2)	19:59	41	19:05 (O3)	18:39	17:53 (O4)	16:24	84	14:42 (O5)	15:40	85	14:45 (O5)		
7	04:35		05:26	19:41 (O2)	06:28	18:24 (O3)	07:28	16:41 (DD1)	07:34	12:24 (DD3)	08:31	12:38 (DD3)						
	22:03		21:13	36	20:17 (O2)	19:56	40	19:04 (O3)	18:36	17:53 (O4)	16:22	86	14:42 (O5)	15:39	84	14:45 (O5)		
8	04:36		05:28	19:41 (O2)	06:30	18:25 (O3)	07:30	16:42 (DD1)	07:36	12:23 (DD3)	08:33	12:38 (DD3)						
	22:02		21:11	36	20:17 (O2)	19:54	38	19:03 (O3)	18:34	17:53 (O4)	16:20	89	14:43 (O5)	15:39	82	14:44 (O5)		
9	04:37		05:30	19:41 (O2)	06:32	18:25 (O3)	07:32	16:42 (DD1)	07:38	12:23 (DD3)	08:34	12:39 (DD3)						
	22:01		21:09	35	20:16 (O2)	19:51	36	19:01 (O3)	18:31	17:52 (O4)	16:18	92	14:45 (O5)	15:38	79	14:43 (O5)		
10	04:38		05:32	19:41 (O2)	06:34	18:26 (O3)	07:34	16:42 (DD1)	07:40	12:23 (DD3)	08:36	12:40 (DD3)						
	22:00		21:06	35	20:16 (O2)	19:48	34	19:00 (O3)	18:28	17:51 (O4)	16:16	92	14:45 (O5)	15:38	76	14:42 (O5)		
11	04:40		05:34	19:41 (O2)	06:36	18:26 (O3)	07:36	16:42 (DD1)	07:42	12:24 (DD3)	08:37	12:41 (DD3)						
	21:59		21:04	34	20:15 (O2)	19:46	31	18:57 (O3)	18:26	17:50 (O4)	16:14	93	14:46 (O5)	15:38	72	14:41 (O5)		
12	04:41		05:36	19:42 (O2)	06:38	18:28 (O3)	07:38	16:43 (DD1)	07:44	12:23 (DD3)	08:38	12:42 (DD3)						
	21:58		21:02	33	20:15 (O2)	19:43	28	18:56 (O3)	18:23	17:48 (O4)	16:12	95	14:46 (O5)	15:37	67	14:31 (JV1)		
13	04:42		05:38	19:43 (O2)	06:40	18:29 (O3)	07:40	16:43 (DD1)	07:46	12:23 (DD3)	08:39	12:42 (DD3)						
	21:57		20:59	31	20:14 (O2)	19:40	24	18:53 (O3)	18:21	17:46 (O4)	16:10	95	14:46 (O5)	15:37	65	14:31 (JV1)		
14	04:44		05:40	19:44 (O2)	06:42	18:32 (O3)	07:42	16:44 (DD1)	07:49	12:24 (DD3)	08:40	12:43 (DD3)						
	21:55		20:57	29	20:13 (O2)	19:38	18	18:50 (O3)	18:18	17:43 (O4)	16:08	96	14:47 (O5)	15:37	65	14:32 (JV1)		
15	04:45		05:42	19:44 (O2)	06:44	18:36 (O3)	07:44	16:45 (DD1)	07:51	12:24 (DD3)	08:41	12:43 (DD3)						
	21:54		20:55	27	20:11 (O2)	19:35	10	18:46 (O3)	18:15	17:21 (DD1)	16:06	95	14:47 (O5)	15:37	66	14:32 (JV1)		
16	04:47		05:44	19:45 (O2)	06:46	17:46	07:46	16:46 (DD1)	07:53	12:24 (DD3)	08:42	12:44 (DD3)						
	21:53		20:52	24	20:09 (O2)	19:32	18:13	33	17:19 (DD1)	16:05	96	14:47 (O5)	15:37	65	14:33 (JV1)			
17	04:48		05:46	19:46 (O2)	06:48	17:48	07:48	16:48 (DD1)	07:55	12:25 (DD3)	08:43	12:45 (DD3)						
	21:51	6	20:02 (O2)	20:50	22	20:08 (O2)	19:30	18:10	29	17:17 (DD1)	16:03	96	14:48 (O5)	15:37	64	14:33 (JV1)		
18	04:50		19:54 (O2)	05:48	18:43 (O3)	06:50	07:51	16:49 (DD1)	07:57	12:25 (DD3)	08:44	12:46 (DD3)						
	21:50	12	20:06 (O2)	20:47	33	20:06 (O2)	19:27	18:08	25	17:14 (DD1)	16:01	96	14:48 (O5)	15:37	64	14:34 (JV1)		
19	04:51		19:52 (O2)	05:50	18:40 (O3)	06:52	07:53	16:52 (DD1)	07:59	12:25 (DD3)	08:45	12:46 (DD3)						
	21:49	15	20:07 (O2)	20:45	32	20:02 (O2)	19:24	18:05	20	17:12 (DD1)	16:00	95	14:48 (O5)	15:37	64	14:35 (JV1)		
20	04:53		19:51 (O2)	05:52	18:38 (O3)	06:54	07:55	16:45 (O1.b)	08:01	12:26 (DD3)	08:45	12:46 (DD3)						
	21:47	18	20:09 (O2)	20:43	24	19:02 (O3)	19:21	18:03	21	17:08 (DD1)	15:58	95	14:49 (O5)	15:38	64	14:34 (JV1)		
21	04:55		19:49 (O2)	05:54	18:36 (O3)	06:55	17:07 (DD1)	07:57	16:42 (O1.b)	08:03	12:26 (DD3)	08:46	12:47 (DD3)					
	21:46	21	20:10 (O2)	20:40	28	19:04 (O3)	19:19	10	14	16:56 (O1.b)	15:57	94	14:48 (O5)	15:38	64	14:35 (JV1)		
22	04:56		19:48 (O2)	05:56	18:33 (O3)	06:57	17:01 (DD1)	07:59	13:52 (DD3)	08:05	12:26 (DD3)	08:47	12:47 (DD3)					
	21:44	24	20:12 (O2)	20:38	31	19:04 (O3)	19:16	20	24	16:58 (O1.b)	15:55	93	14:48 (O5)	15:38	64	14:35 (JV1)		
23	04:58		19:47 (O2)	05:58	18:32 (O3)	06:59	16:58 (DD1)	08:01	13:45 (DD3)	08:07	12:27 (DD3)	08:47	12:48 (DD3)					
	21:42	25	20:12 (O2)	20:35	33	19:05 (O3)	19:13	25	41	16:59 (O1.b)	15:54	91	14:48 (O5)	15:39	64	14:36 (JV1)		
24	05:00		19:46 (O2)	06:00	18:31 (O3)	07:01	16:56 (DD1)	08:03	13:41 (DD3)	08:09	12:28 (DD3)	08:48	12:48 (DD3)					
	21:41	27	20:13 (O2)	20:33	35	19:06 (O3)	19:11	29	50	17:00 (O1.b)	15:52	91	14:49 (O5)	15:40	64	14:36 (JV1)		
25	05:02		19:45 (O2)	06:02	18:30 (O3)	07:03	16:53 (DD1)	07:05	12:37 (DD3)	08:11	12:28 (DD3)	08:48	12:48 (DD3)					
	21:39	28	20:13 (O2)	20:30	37	19:07 (O3)	19:08	33	57	16:00 (O1.b)	15:51	89	14:48 (O5)	15:40	65	14:37 (JV1)		
26	05:03		19:45 (O2)	06:04	18:29 (O3)	07:05	16:51 (DD1)	07:08	12:36 (DD3)	08:13	12:29 (DD3)	08:48	12:50 (DD3)					
	21:37	30	20:15 (O2)	20:28	38	19:07 (O3)	19:05	36	62	16:01 (O1.b)	15:50	87	14:48 (O5)	15:41	64	14:38 (JV1)		
27	05:05		19:44 (O2)	06:06	18:28 (O3)	07:07	16:50 (DD1)	07:10	12:33 (DD3)	08:15	12:30 (DD3)	08:48	12:50 (DD3)					
	21:35	31	20:15 (O2)	20:25	40	19:08 (O3)	19:03	41	65	16:00 (O1.b)	15:48	94	14:48 (O5)	15:42	64	14:38 (JV1)		
28	05:07		19:43 (O2)	06:08	18:27 (O3)	07:09	16:48 (DD1)	07:12	12:31 (DD3)	08:16	12:30 (DD3)	08:48	12:50 (DD3)					
	21:33	32	20:15 (O2)	20:22	41	19:08 (O3)	19:00	53	69	16:00 (O1.b)	15:47	94	14:48 (O5)	15:43	65	14:39 (JV1)		
29	05:09		19:43 (O2)	06:10	18:26 (O3)	07:11	16:47 (DD1)	07:14	12:31 (DD3)	08:18	12:31 (DD3)	08:49	12:49 (DD3)					
	21:31	33	20:16 (O2)	20:20	42	19:08 (O3)	18:57	59	71	16:01 (O1.b)	15:46	93	14:47 (O5)	15:44	65	14:38 (JV1)		
30	05:11		19:43 (O2)	06:12	18:26 (O3)	07:14	16:46 (DD1)	07:16	12:29 (DD3)	08:20	12:32 (DD3)	08:49	12:50 (DD3)					
	21:30	34	20:17 (O2)	20:17	42	19:08 (O3)	18:55	63	73	16:00 (O1.b)	15:45	93	14:47 (O5)	15:45	66	14:39 (JV1)		
31	05:13		19:42 (O2)	06:14	18:24 (O3)	07:15	17:52 (O4)	17:16	12:27 (DD3)	08:21	12:33 (DD3)	08:48	12:50 (DD3)					
	21:28	34	20:16 (O2)	20:15	43	19:07 (O3)	18:54	64	74	15:59 (O1.b)	15:44	93	14:47 (O5)	15:46	67	14:40 (JV1)		
Potential sun hours	528		469		384		324		248		217							
Total, worst case	370		1056		880		1700		2719		2229							
Sun reduction	0,47		0,52		0,43		0,29		0,08		0,08							
Oper. time red.	1,00		1,00		1,00		1,00		1,00		1,00							
Wind dir. red.	1,00		1,00		1,00		1,00		1,00		1,00							
Total reduction	0,47		0,52		0,43		0,29		0,08		0,08							
Total, real	175		552		380		493		204		188							

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Celinmajas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (574)  
Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:24 21:15	06:25 20:01	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:02	05:26 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:50 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:27 21:10	06:29 19:53	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:37 22:01	05:29 21:08	06:31 19:51	07:31 18:30	07:38 16:17	08:34 15:38
10	08:43 15:59	07:54 17:04	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 19:48	07:33 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:02	04:40 21:58	05:35 21:01	06:37 19:43	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:56	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:13 20:18	05:03 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:54	06:43 19:34	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:18	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	07:52 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	07:57 16:01	08:44 15:36
19	08:34 16:16	07:33 17:24	06:21 18:24	06:00 20:28	04:53 21:29	04:24 22:07	04:51 21:48	05:49 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:30	04:24 22:07	04:52 21:47	05:51 20:42	06:53 19:21	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:07	04:56 21:44	05:55 20:37	06:57 19:16	07:59 17:58	08:05 15:54	08:46 15:38
23	08:28 16:24	07:23 17:32	06:11 18:32	05:50 20:36	04:47 21:36	04:24 22:08	04:58 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:24 22:08	04:59 21:40	05:59 20:32	07:01 19:10	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 19:08	08:05 16:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:40
27	08:21 16:33	07:14 17:41	06:00 18:40	05:40 20:45	04:41 21:42	04:26 22:07	05:05 21:35	06:05 20:25	07:07 19:02	08:09 16:46	08:14 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:57 18:42	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	07:09 19:00	08:12 16:43	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:45	04:27 22:07	05:08 21:31	06:09 20:19	07:11 18:57	08:14 16:41	08:18 15:45	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 18:54	08:16 16:39	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:48		05:12 21:27	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Celmalas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (555)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:46	08:12 16:43	07:08 17:45	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:51	07:20 16:34	08:22 15:43
2	08:48 15:47	08:10 16:45	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:41
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	07:21 18:43	07:27 16:27	08:27 15:40
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:23 21:15	06:25 19:59	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:56	07:58 16:59	06:50 18:00	06:28 20:05	05:15 21:07	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:25 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51	07:31 18:30	07:38 16:17	08:34 15:37
10	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:31 21:06	06:33 19:48	07:33 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:11	05:09 21:13	04:25 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:35 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:03	04:40 21:58	05:35 21:01	06:37 19:42	07:38 18:23	07:44 16:11	08:38 15:36
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	19:46 (PrRR3) 19:47 (PrRR3)	05:05 21:17	04:41 22:03	05:37 21:57	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	19:42 (PrRR3) 19:48 (PrRR3)	05:03 21:19	04:43 22:04	05:39 21:55	06:41 19:37	07:42 18:17	07:48 16:07	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	19:41 (PrRR3) 19:51 (PrRR3)	05:01 21:21	04:44 22:05	05:41 21:54	06:43 19:34	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:17	06:07 20:22	19:39 (PrRR3) 19:52 (PrRR3)	04:59 21:23	04:46 22:05	05:43 21:53	06:45 19:32	07:46 18:12	07:52 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	19:39 (PrRR3) 19:54 (PrRR3)	04:57 21:25	04:43 22:06	05:45 21:51	19:49 (PrRR3) 19:55 (PrRR3)	06:47 19:29	07:55 18:10	08:43 16:02
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	19:38 (PrRR3) 19:56 (PrRR3)	04:55 21:27	04:49 22:06	05:47 21:50	19:46 (PrRR3) 19:57 (PrRR3)	06:49 19:26	07:57 18:07	08:44 16:00
19	08:34 16:16	07:33 17:23	06:21 18:24	06:00 20:28	19:38 (PrRR3) 19:57 (PrRR3)	04:53 21:29	04:43 22:07	05:49 21:48	19:45 (PrRR3) 19:59 (PrRR3)	06:51 19:24	07:52 18:05	08:45 15:59
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	19:37 (PrRR3) 19:56 (PrRR3)	04:51 21:30	04:43 22:07	05:51 21:47	19:44 (PrRR3) 20:00 (PrRR3)	06:53 19:21	07:54 18:02	08:01 15:57
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	19:38 (PrRR3) 19:56 (PrRR3)	04:50 21:32	04:43 22:07	05:53 21:45	19:43 (PrRR3) 20:00 (PrRR3)	06:55 19:18	07:56 18:00	08:03 15:56
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	19:38 (PrRR3) 19:55 (PrRR3)	04:48 21:34	04:46 22:08	05:55 21:44	19:42 (PrRR3) 20:01 (PrRR3)	06:57 19:16	07:59 17:57	08:05 15:54
23	08:28 16:24	07:23 17:32	06:11 18:32	05:50 20:36	19:38 (PrRR3) 19:54 (PrRR3)	04:46 21:36	04:47 22:08	05:57 21:42	19:42 (PrRR3) 20:01 (PrRR3)	06:59 19:13	08:01 17:55	08:07 15:53
24	08:26 16:26	07:21 17:34	06:08 18:34	05:47 20:39	19:39 (PrRR3) 19:53 (PrRR3)	04:45 21:37	04:49 22:08	05:59 21:40	19:42 (PrRR3) 20:01 (PrRR3)	07:01 19:10	08:03 17:53	08:09 15:51
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	19:39 (PrRR3) 19:51 (PrRR3)	04:45 21:39	04:49 22:08	06:01 21:30	19:42 (PrRR3) 19:59 (PrRR3)	07:03 19:07	08:05 16:50	08:11 15:50
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	19:44 (PrRR3) 19:47 (PrRR3)	04:42 21:41	04:25 22:08	06:03 21:37	19:41 (PrRR3) 19:56 (PrRR3)	07:05 19:05	08:07 16:48	08:13 15:49
27	08:21 16:32	07:14 17:41	06:00 18:40	05:40 20:45	19:41 (PrRR3) 19:47 (PrRR3)	04:40 21:42	04:25 22:08	06:05 21:35	19:41 (PrRR3) 19:54 (PrRR3)	07:07 19:02	08:09 16:45	08:14 15:47
28	08:20 16:34	07:11 17:43	05:57 18:42	05:38 20:47	19:42 (PrRR3) 19:48 (PrRR3)	04:39 21:44	04:26 22:07	06:07 21:33	19:42 (PrRR3) 19:51 (PrRR3)	07:09 18:59	08:12 16:43	08:16 15:46
29	08:18 16:37		06:55 19:45	05:35 20:49	19:43 (PrRR3) 19:49 (PrRR3)	04:38 21:46	04:27 22:07	06:09 21:31	19:43 (PrRR3) 19:49 (PrRR3)	07:11 18:57	08:14 16:41	08:18 15:45
30	08:16 16:39		06:52 19:47	05:33 20:51		04:36 21:47	04:27 22:07	06:11 21:29		07:13 18:54	08:16 16:38	08:48 15:44
31	08:14 16:41		06:49 19:49			04:35 21:49		06:13 21:27			08:18 16:36	08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case				179				181				
Sun reduction				0,44				0,52				
Oper. time red.				1,00				1,00				
Wind dir. red.				1,00				1,00				
Total reduction				0,44				0,52				
Total, real				79				94				

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Celtekas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (518)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		05:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Cielavinas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (430)  
Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January	February	March	April	May	June
1	08:48	08:13	07:09	16:26 (DD3)	06:47	18:54 (O3)
	15:47	16:44	17:46	25	16:51 (DD3)	19:51
2	08:48	08:11	07:06	16:27 (DD3)	06:44	18:55 (O3)
	15:48	16:46	17:48	23	16:50 (DD3)	19:53
3	08:48	08:09	07:04	16:28 (DD3)	06:42	18:57 (O3)
	15:50	16:48	17:50	21	16:49 (DD3)	19:55
4	08:47	08:07	07:01	16:29 (DD3)	06:39	19:06 (O3)
	15:51	16:51	17:52	18	16:47 (DD3)	19:57
5	08:47	08:05	06:59	16:31 (DD3)	06:36	19:06 (O3)
	15:52	16:53	17:55	14	16:45 (DD3)	19:59
6	08:46	08:03	06:56	16:35 (DD3)	06:34	19:06 (O3)
	15:54	16:55	17:57	7	16:42 (DD3)	20:01
7	08:46	08:00	06:53	16:36 (DD3)	06:31	19:06 (O3)
	15:55	16:57	17:59		20:04	19:06 (O3)
8	08:45	07:58	06:51	17:26 (DD1)	06:29	19:06 (O3)
	15:57	16:59	18:01	6	17:32 (DD1)	20:06
9	08:44	07:56	06:48	17:24 (DD1)	06:26	19:06 (O3)
	15:58	17:02	18:03	11	17:35 (DD1)	20:08
10	08:44	15:18 (P19.2b)	07:54	17:22 (DD1)	06:23	19:06 (O3)
	16:00	15:19 (P19.2b)	17:04	18:05	15	17:37 (DD1)
11	08:43	15:17 (P19.2b)	07:52	06:43	17:21 (DD1)	06:21
	16:02	15:21 (P19.2b)	17:06	18:07	18	17:39 (DD1)
12	08:42	15:17 (P19.2b)	07:50	06:40	17:21 (DD1)	06:18
	16:03	15:23 (P19.2b)	17:08	18:09	20	17:41 (DD1)
13	08:41	15:17 (P19.2b)	07:47	16:36 (O5)	06:38	17:20 (DD1)
	16:05	15:26 (P19.2b)	17:11	3	16:39 (O5)	18:12
14	08:40	15:16 (P19.2b)	07:45	16:33 (O5)	06:35	17:20 (DD1)
	16:07	15:27 (P19.2b)	17:13	8	16:41 (O5)	18:14
15	08:39	15:16 (P19.2b)	07:43	16:33 (O5)	06:32	17:20 (DD1)
	16:09	15:30 (P19.2b)	17:15	11	16:44 (O5)	18:16
16	08:38	15:16 (P19.2b)	07:41	16:31 (O5)	06:30	17:20 (DD1)
	16:11	15:31 (P19.2b)	17:17	15	16:46 (O5)	18:18
17	08:36	15:16 (P19.2b)	07:38	16:31 (O5)	06:27	17:20 (DD1)
	16:13	15:34 (P19.2b)	17:20	18	16:49 (O5)	18:20
18	08:35	15:16 (P19.2b)	07:36	16:30 (O5)	06:24	17:22 (DD1)
	16:15	15:35 (P19.2b)	17:22	20	16:50 (O5)	18:22
19	08:34	15:17 (P19.2b)	07:33	16:30 (DD3)	06:22	17:23 (DD1)
	16:16	15:36 (P19.2b)	17:24	20	16:50 (DD3)	18:24
20	08:32	15:16 (P19.2b)	07:31	16:28 (DD3)	06:19	17:27 (DD1)
	16:18	15:36 (P19.2b)	17:26	23	16:51 (DD3)	18:26
21	08:31	15:16 (P19.2b)	07:29	16:28 (DD3)	06:16	17:30 (DD1)
	16:20	15:36 (P19.2b)	17:28	24	16:52 (DD3)	18:28
22	08:30	15:18 (P19.2b)	07:26	16:27 (DD3)	06:14	17:30 (DD1)
	16:23	15:37 (P19.2b)	17:31	26	16:53 (DD3)	18:30
23	08:28	15:18 (P19.2b)	07:24	16:27 (DD3)	06:11	18:01 (O3)
	16:25	15:37 (P19.2b)	17:33	26	16:53 (DD3)	18:32
24	08:26	15:18 (P19.2b)	07:21	16:26 (DD3)	06:08	17:58 (O3)
	16:27	15:37 (P19.2b)	17:35	27	16:53 (DD3)	18:35
25	08:25	15:19 (P19.2b)	07:19	16:25 (DD3)	06:06	17:57 (O3)
	16:29	15:37 (P19.2b)	17:37	28	16:53 (DD3)	18:37
26	08:23	15:19 (P19.2b)	07:16	16:26 (DD3)	06:03	17:55 (O3)
	16:31	15:36 (P19.2b)	17:39	27	16:53 (DD3)	18:39
27	08:22	15:20 (P19.2b)	07:14	16:25 (DD3)	06:00	17:54 (O3)
	16:33	15:35 (P19.2b)	17:42	27	16:52 (DD3)	18:41
28	08:20	15:22 (P19.2b)	07:11	16:26 (DD3)	05:58	17:54 (O3)
	16:35	15:35 (P19.2b)	17:44	27	16:53 (DD3)	18:43
29	08:18	15:24 (P19.2b)			06:55	18:53 (O3)
	16:37	15:33 (P19.2b)			19:45	19:13 (O3)
30	08:16	15:27 (P19.2b)			06:52	18:53 (O3)
	16:40	15:30 (P19.2b)			19:47	19:12 (O3)
31	08:14				06:50	18:54 (O3)
	16:42				19:49	19:12 (O3)
Potential sun hours	236	266	366		426	507
Total, worst case	288	330	439		38	528
Sun reduction	0,13	0,22	0,39		0,44	
Oper. time red.	1,00	1,00	1,00		1,00	
Wind dir. red.	1,00	1,00	1,00		1,00	
Total reduction	0,13	0,22	0,39		0,44	
Total, real	39	74	172		17	

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Cielavinas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (430)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December	
1	04:29	05:14	06:16	07:15	18:00 (DD1)	07:20	08:22 14:59 (P19.2b)
	22:06	21:26	20:12	18:52	20 18:20 (DD1)	16:35	15:44 4 15:03 (P19.2b)
2	04:30	05:16	06:18	07:17	18:00 (DD1)	07:23	08:23 15:01 (P19.2b)
	22:06	21:24	20:09	18:49	19 18:19 (DD1)	16:32	15:43 1 15:02 (P19.2b)
3	04:31	05:18	06:20	07:19	18:00 (DD1)	07:25	08:25
	22:05	21:21	20:07	18:47	16 18:16 (DD1)	16:30	15:42
4	04:32	05:20	06:22	07:22	18:01 (DD1)	07:27	08:27
	22:05	21:19	20:04	18:44	12 18:13 (DD1)	16:28	15:41
5	04:33	05:22	06:24	07:24	18:02 (DD1)	07:29	08:28
	22:04	21:17	20:01	18:41	8 18:10 (DD1)	16:26	15:41
6	04:34	05:24	06:26	07:26	18:04 (DD1)	07:31	08:30
	22:03	21:15	19:59	18:39	4 18:08 (DD1)	16:24	15:40
7	04:35	05:26	06:28	07:28		07:33	08:31
	22:03	21:13	19:56	18:36		16:22	15:39
8	04:36	05:28	06:30	07:30	17:08 (DD3)	07:36	08:33
	22:02	21:11	19:54	18:33	11 17:19 (DD3)	16:20	15:39
9	04:37	05:30	06:32	18:52 (O3)	07:32	17:05 (DD3)	07:38 08:34
	22:01	21:08	19:51	8 19:00 (O3)	18:31	17 17:22 (DD3)	16:18 15:38
10	04:38	05:32	06:34	18:48 (O3)	07:34	17:03 (DD3)	07:40 08:35
	22:00	21:06	19:48	13 19:01 (O3)	18:28	20 17:23 (DD3)	16:16 15:38
11	04:40	05:34	06:36	18:46 (O3)	07:36	17:02 (DD3)	07:42 08:37
	21:59	21:04	19:46	16 19:02 (O3)	18:26	22 17:24 (DD3)	16:14 15:37
12	04:41	05:36	06:38	18:45 (O3)	07:38	17:00 (DD3)	07:44 14:59 (P19.2b) 08:38
	21:58	21:02	19:43	18 19:03 (O3)	18:23	24 17:24 (DD3)	16:12 3 15:02 (P19.2b) 15:37
13	04:42	05:38	06:40	18:44 (O3)	07:40	16:59 (DD3)	07:46 14:55 (P19.2b) 08:39
	21:57	20:59	19:40	19 19:03 (O3)	18:20	26 17:25 (DD3)	16:10 10 15:05 (P19.2b) 15:37
14	04:44	05:40	06:42	18:44 (O3)	07:42	16:58 (DD3)	07:48 14:55 (P19.2b) 08:40
	21:55	20:57	19:38	19 19:03 (O3)	18:18	27 17:25 (DD3)	16:08 13 15:08 (P19.2b) 15:37
15	04:45	05:42	06:44	18:43 (O3)	07:44	16:58 (DD3)	07:51 14:53 (P19.2b) 08:41
	21:54	20:55	19:35	20 19:03 (O3)	18:15	28 17:26 (DD3)	16:06 15 15:08 (P19.2b) 15:37
16	04:47	05:44	06:46	18:43 (O3)	07:46	16:58 (DD3)	07:53 14:52 (P19.2b) 08:42
	21:53	20:52	19:32	19 19:02 (O3)	18:13	27 17:25 (DD3)	16:05 17 15:09 (P19.2b) 15:37
17	04:48	05:46	06:47	18:44 (O3)	07:48	16:57 (DD3)	07:55 14:53 (P19.2b) 08:43
	21:51	20:50	19:29	16 19:00 (O3)	18:10	28 17:25 (DD3)	16:03 17 15:10 (P19.2b) 15:37
18	04:50	05:48	06:49	18:44 (O3)	07:50	16:57 (DD3)	07:57 14:52 (P19.2b) 08:44
	21:50	20:47	19:27	13 18:57 (O3)	18:08	27 17:24 (DD3)	16:01 19 15:11 (P19.2b) 15:37
19	04:51	05:50	06:51	18:45 (O3)	07:53	16:57 (DD3)	07:59 14:52 (P19.2b) 08:45
	21:49	20:45	19:24	9 18:54 (O3)	18:05	26 17:23 (DD3)	16:00 19 15:11 (P19.2b) 15:37
20	04:53	05:52	06:53	18:46 (O3)	07:55	16:58 (DD3)	08:01 14:53 (P19.2b) 08:45
	21:47	20:43	19:21	6 18:52 (O3)	18:03	26 17:24 (DD3)	15:58 19 15:12 (P19.2b) 15:38
21	04:55	05:54	06:55		07:57	16:58 (DD3)	08:03 14:52 (P19.2b) 08:46
	21:45	20:40	19:19		18:00	24 17:22 (DD3)	15:56 20 15:12 (P19.2b) 15:38
22	04:56	05:56	06:57		07:59	16:59 (DD3)	08:05 14:52 (P19.2b) 08:47
	21:44	20:38	19:16		17:58	22 17:21 (DD3)	15:55 20 15:12 (P19.2b) 15:38
23	04:58	05:58	06:59		08:01	17:01 (DD3)	08:07 14:53 (P19.2b) 08:47
	21:42	20:35	19:13		17:56	19 17:20 (DD3)	15:54 19 15:12 (P19.2b) 15:39
24	05:00	06:00	07:01	18:08 (DD1)	08:03	17:01 (O5)	08:09 14:54 (P19.2b) 08:47
	21:40	20:33	19:11	10 18:18 (DD1)	17:53	19 17:20 (O5)	15:52 19 15:13 (P19.2b) 15:40
25	05:02	06:02	07:03	18:05 (DD1)	07:05	16:01 (O5)	08:11 14:54 (P19.2b) 08:48
	21:39	20:30	19:08	14 18:19 (DD1)	16:51	17 16:18 (O5)	15:51 18 15:12 (P19.2b) 15:40
26	05:03	06:04	07:05	18:03 (DD1)	07:07	16:02 (O5)	08:13 14:55 (P19.2b) 08:48
	21:37	20:27	19:05	17 18:20 (DD1)	16:48	14 16:16 (O5)	15:49 15 15:10 (P19.2b) 15:41
27	05:05	06:06	07:07	18:02 (DD1)	07:10	16:02 (O5)	08:15 14:55 (P19.2b) 08:48
	21:35	20:25	19:03	19 18:21 (DD1)	16:46	11 16:13 (O5)	15:48 14 15:09 (P19.2b) 15:42
28	05:07	06:08	07:09	18:01 (DD1)	07:12	16:03 (O5)	08:16 14:56 (P19.2b) 08:48
	21:33	20:22	19:00	20 18:21 (DD1)	16:44	7 16:10 (O5)	15:47 11 15:07 (P19.2b) 15:43
29	05:09	06:10	07:11	18:00 (DD1)	07:14	16:06 (O5)	08:18 14:57 (P19.2b) 08:48
	21:31	20:20	18:57	21 18:21 (DD1)	16:41	2 16:08 (O5)	15:46 9 15:06 (P19.2b) 15:44
30	05:11	06:12	07:13	18:00 (DD1)	07:16		08:20 14:58 (P19.2b) 08:48
	21:29	20:17	18:55	21 18:21 (DD1)	16:39		15:45 7 15:05 (P19.2b) 15:45
31	05:13	06:14			07:18		
	21:28	20:15			16:37		15:46
Potential sun hours	528	469	384	324		248	217
Total, worst case			298	523	284		5
Sun reduction			0,43	0,29	0,08		0,08
Oper. time red.			1,00	1,00	1,00		1,00
Wind dir. red.			1,00	1,00	1,00		1,00
Total reduction			0,43	0,29	0,08		0,08
Total, real			129	152	21		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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Dadziš i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (485)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:15	06:17	07:17	07:22	08:23
	15:47	16:45	17:47	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:05	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:05	15:36
16	08:37	07:40	06:29	06:07	04:59	04:23	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Dauguli - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (493)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:46	08:12 16:43	07:08 17:45	06:47 19:51	05:30 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	19:38 (PrRR3) 19:41 (PrRR3)	07:15 18:51	07:20 16:34
2	08:48 15:47	08:10 16:45	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09		07:17 18:49	07:22 16:32
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06		07:19 18:46	07:25 16:30
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04		07:21 18:43	07:27 16:27
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01		07:23 18:41	07:29 16:25
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:23 21:15	06:25 19:58		07:25 18:38	07:31 16:23
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56		07:27 18:36	07:33 16:21
8	08:45 15:56	07:58 16:59	06:50 18:00	06:28 20:05	05:15 21:07	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53		07:29 18:33	07:35 16:19
9	08:44 15:58	07:56 17:01	06:48 18:03	06:25 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51		07:31 18:30	07:38 16:17
10	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:31 21:06	06:33 19:48		07:33 18:28	07:40 16:15
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:11	19:39 (PrRR3) 19:43 (PrRR3)	05:09 21:13	04:25 22:02	05:33 21:59	06:35 19:45		07:35 18:25	07:42 16:13
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	19:37 (PrRR3) 19:44 (PrRR3)	05:07 21:15	04:25 22:03	05:35 21:01	06:37 19:42		07:38 18:23	07:44 16:11
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	19:36 (PrRR3) 19:47 (PrRR3)	05:05 21:17	04:25 22:03	05:37 20:59	06:39 19:40		07:40 18:20	07:46 16:09
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	19:34 (PrRR3) 19:48 (PrRR3)	05:03 21:19	04:24 22:04	05:39 20:57	06:41 19:37		07:42 18:17	07:48 16:07
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	19:34 (PrRR3) 19:51 (PrRR3)	05:01 21:21	04:24 22:05	05:41 20:54	06:43 19:34		07:44 18:15	07:50 16:06
16	08:37 16:10	07:40 17:17	06:29 18:17	06:07 20:22	19:33 (PrRR3) 19:52 (PrRR3)	04:59 21:23	04:24 22:05	05:43 20:52	06:45 19:32		07:46 18:12	07:52 16:04
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	19:33 (PrRR3) 19:52 (PrRR3)	04:57 21:25	04:23 22:06	05:45 20:50	06:47 19:29		07:48 18:10	07:55 16:02
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	19:33 (PrRR3) 19:51 (PrRR3)	04:55 21:27	04:23 22:06	05:47 20:47	06:49 19:26		07:50 18:07	07:57 16:00
19	08:34 16:16	07:33 17:23	06:21 18:24	06:00 20:28	19:33 (PrRR3) 19:51 (PrRR3)	04:53 21:29	04:23 22:07	05:49 20:45	06:51 19:24		07:52 18:05	07:59 15:59
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	19:33 (PrRR3) 19:49 (PrRR3)	04:51 21:30	04:23 22:07	05:51 20:42	06:53 19:21	19:44 (PrRR3)	07:54 18:02	08:01 15:57
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	19:35 (PrRR3) 19:48 (PrRR3)	04:50 21:32	04:23 22:07	05:53 20:40	06:55 19:18	19:41 (PrRR3)	07:56 18:00	08:03 15:56
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	19:37 (PrRR3) 19:47 (PrRR3)	04:48 21:34	04:24 22:08	05:55 20:37	06:57 19:16	19:52 (PrRR3)	07:59 17:57	08:05 15:54
23	08:28 16:24	07:23 17:32	06:11 18:32	05:50 20:36	19:39 (PrRR3) 19:42 (PrRR3)	04:46 21:36	04:24 22:08	05:57 20:35	06:59 19:13	19:38 (PrRR3)	08:01 17:55	08:07 15:53
24	08:26 16:26	07:21 17:34	06:08 18:34	05:47 20:39	19:39 (PrRR3) 19:44 (PrRR3)	04:45 21:37	04:24 22:08	05:59 20:32	07:01 19:10	19:37 (PrRR3)	08:03 17:53	08:09 15:51
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	19:39 (PrRR3) 19:44 (PrRR3)	04:43 21:39	04:25 22:08	06:01 20:30	07:03 19:07	19:36 (PrRR3)	08:05 17:50	08:11 15:50
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	19:37 (PrRR3) 19:42 (PrRR3)	04:42 21:41	04:25 22:08	06:03 20:27	07:05 19:05	19:35 (PrRR3)	08:07 17:48	08:13 15:49
27	08:21 16:32	07:14 17:41	06:00 18:40	05:40 20:45	19:35 (PrRR3) 19:40 (PrRR3)	04:40 21:42	04:25 22:08	06:05 20:25	07:07 19:02	19:34 (PrRR3)	08:09 17:45	08:14 15:47
28	08:20 16:34	07:11 17:43	05:57 18:42	05:38 20:47	19:35 (PrRR3) 19:40 (PrRR3)	04:39 21:44	04:26 22:07	06:07 20:22	07:09 18:59	19:34 (PrRR3)	08:11 17:42	08:16 15:46
29	08:18 16:37		06:55 19:45	05:35 20:49	19:35 (PrRR3) 19:40 (PrRR3)	04:38 21:46	04:27 22:07	06:09 20:19	07:11 18:57	19:33 (PrRR3)	08:13 17:41	08:18 15:45
30	08:16 16:39		06:52 19:47	05:33 20:51	19:36 (PrRR3) 19:41 (PrRR3)	04:36 21:47	04:27 22:07	06:11 20:17	07:13 18:54	19:32 (PrRR3)	08:15 17:38	08:20 15:44
31	08:14 16:41		06:49 19:49		19:37 (PrRR3) 19:42 (PrRR3)	04:35 21:49		06:13 20:14		19:31 (PrRR3) 19:44 (PrRR3)	08:18 17:36	08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384		324	248
Total, worst case				169				167	3			217
Sun reduction				0,44				0,52	0,43			
Oper. time red.				1,00				1,00	1,00			
Wind dir. red.				1,00				1,00	1,00			
Total reduction				0,44				0,52	0,43			
Total, real				75				87	1			

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

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0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Driveniš ki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (449)  
Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January	February	March	April	May	June	
1	08:48	08:13	07:09	06:47	05:31	04:35	05:38 (P19.2b)
	15:47	16:44	17:46	19:51	20:53	21:50	16 05:54 (P19.2b)
2	08:48	08:11	07:06	06:45	05:29	04:34	05:39 (P19.2b)
	15:49	16:46	17:48	19:53	20:55	21:51	14 05:53 (P19.2b)
3	08:48	08:09	07:04	06:42	05:27	04:33	05:40 (P19.2b)
	15:50	16:49	17:50	19:55	20:57	21:53	12 05:52 (P19.2b)
4	08:47	08:07	07:01	06:39	05:25	04:32	05:41 (P19.2b)
	15:51	16:51	17:53	19:57	20:59	21:54	11 05:52 (P19.2b)
5	08:47	08:05	06:59	06:37	05:22	04:31	05:42 (P19.2b)
	15:53	16:53	17:55	20:00	21:01	21:55	9 05:51 (P19.2b)
6	08:46	08:03	06:56	06:34	05:20	04:30	05:44 (P19.2b)
	15:54	16:55	17:57	20:02	21:04	21:57	6 05:50 (P19.2b)
7	08:46	08:01	06:54	06:31	05:18	04:29	
	15:56	16:58	17:59	20:04	21:06	21:58	
8	08:45	07:58	06:51	06:29	05:16	04:29	
	15:57	17:00	18:01	20:06	21:08	21:59	
9	08:44	07:56	06:48	06:26	05:14	05:43 (P19.2b)	04:28
	15:59	17:02	18:03	20:08	21:10	5 05:48 (P19.2b)	22:00
10	08:44	07:54	06:46	06:24	05:12	05:41 (P19.2b)	04:27
	16:00	17:04	18:05	20:10	21:12	10 05:51 (P19.2b)	22:01
11	08:43	07:52	06:43	06:21	05:10	05:39 (P19.2b)	04:27
	16:02	17:06	18:08	20:12	21:14	13 05:52 (P19.2b)	22:02
12	08:42	07:50	06:41	06:18	05:08	05:37 (P19.2b)	04:26
	16:04	17:09	18:10	20:14	21:15	16 05:53 (P19.2b)	22:03
13	08:41	07:48	06:38	06:16	05:06	05:35 (P19.2b)	04:26
	16:05	17:11	18:12	20:16	21:17	19 05:54 (P19.2b)	22:03
14	08:40	07:45	06:35	06:13	05:04	05:35 (P19.2b)	04:25
	16:07	17:13	18:14	20:18	21:19	20 05:55 (P19.2b)	22:04
15	08:39	07:43	06:33	06:11	05:02	05:34 (P19.2b)	04:25
	16:09	17:15	18:16	20:20	21:21	21 05:55 (P19.2b)	22:05
16	08:38	07:41	06:30	06:08	05:00	05:34 (P19.2b)	04:25
	16:11	17:18	18:18	20:22	21:23	22 05:56 (P19.2b)	22:05
17	08:36	07:38	06:27	06:06	04:58	05:34 (P19.2b)	04:25
	16:13	17:20	18:20	20:24	21:25	22 05:56 (P19.2b)	22:06
18	08:35	07:36	06:25	06:03	04:56	05:33 (P19.2b)	04:25
	16:15	17:22	18:22	20:26	21:27	23 05:56 (P19.2b)	22:06
19	08:34	07:34	06:22	06:01	04:54	05:33 (P19.2b)	04:25
	16:17	17:24	18:24	20:29	21:29	23 05:56 (P19.2b)	22:07
20	08:33	07:31	06:19	05:58	04:53	05:33 (P19.2b)	04:25
	16:19	17:26	18:26	20:31	21:31	24 05:57 (P19.2b)	22:07
21	08:31	07:29	06:17	05:55	04:51	05:33 (P19.2b)	04:25
	16:21	17:29	18:29	20:33	21:32	23 05:56 (P19.2b)	22:07
22	08:30	07:26	06:14	05:53	04:49	05:33 (P19.2b)	04:25
	16:23	17:31	18:31	20:35	21:34	24 05:57 (P19.2b)	22:08
23	08:28	07:24	06:11	05:51	04:48	05:34 (P19.2b)	04:25
	16:25	17:33	18:33	20:37	21:36	23 05:57 (P19.2b)	22:08
24	08:27	07:21	06:09	05:48	04:46	05:34 (P19.2b)	04:25
	16:27	17:35	18:35	20:39	21:38	22 05:56 (P19.2b)	22:08
25	08:25	07:19	06:06	05:46	04:44	05:34 (P19.2b)	04:26
	16:29	17:37	18:37	20:41	21:39	22 05:56 (P19.2b)	22:08
26	08:23	07:17	06:03	05:43	04:43	05:35 (P19.2b)	04:26
	16:31	17:40	18:39	20:43	21:41	21 05:56 (P19.2b)	22:08
27	08:22	07:14	06:01	05:41	04:42	05:35 (P19.2b)	04:27
	16:33	17:42	18:41	20:45	21:43	20 05:55 (P19.2b)	22:08
28	08:20	07:11	05:58	05:38	04:40	05:35 (P19.2b)	04:27
	16:35	17:44	18:43	20:47	21:44	20 05:55 (P19.2b)	22:07
29	08:18		06:55	05:36	04:39	05:36 (P19.2b)	04:28
	16:38		19:45	20:49	21:46	19 05:55 (P19.2b)	22:07
30	08:16		06:53	05:34	04:38	05:37 (P19.2b)	04:29
	16:40		19:47	20:51	21:47	18 05:55 (P19.2b)	22:07
31	08:14		06:50		04:36	05:37 (P19.2b)	
	16:42		19:49		21:49	17 05:54 (P19.2b)	
Potential sun hours	236	266	366	426	507	528	
Total, worst case					447		68
Sun reduction					0,56		0,57
Oper. time red.					1,00		1,00
Wind dir. red.					1,00		1,00
Total reduction					0,56		0,57
Total, real					252		39

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
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 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Driveniš ki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (449)  
 Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:29 22:06	05:15 21:26	05:48 (P19.2b) 21:26	06:16 20:12	07:16 18:52	07:21 16:35
2	04:30 22:06	05:17 21:24	05:50 (P19.2b) 21:24	06:18 20:10	07:18 18:49	07:23 16:33
3	04:31 22:05	05:19 21:22	05:52 (P19.2b) 21:22	06:20 20:07	07:20 18:47	07:25 16:30
4	04:32 22:05	05:19 21:19	06:00 (P19.2b) 21:19	06:22 20:04	07:22 18:44	07:27 16:28
5	04:33 22:04	05:22 21:17		06:24 20:02	07:24 18:42	07:29 16:26
6	04:34 22:03	05:24 21:15		06:26 19:59	07:26 18:39	07:31 16:24
7	04:35 22:03	05:26 21:13		06:28 19:56	07:28 18:36	07:34 16:22
8	04:36 22:02	05:28 21:11		06:30 19:54	07:30 18:34	07:36 16:20
9	04:37 22:01	05:30 21:09		06:32 19:51	07:32 18:31	07:38 16:18
10	04:39 22:00	05:32 21:06		06:34 19:48	07:34 18:28	07:40 16:16
11	04:40 21:59	05:34 21:04		06:36 19:46	07:36 18:26	07:42 16:14
12	04:41 21:58	05:36 21:02		06:38 19:43	07:38 18:23	07:44 16:12
13	04:43 21:57	05:38 20:59		06:40 19:40	07:40 18:21	07:46 16:10
14	04:44 21:55	05:40 20:57		06:42 19:38	07:42 18:18	07:49 16:08
15	04:46 21:54	05:42 20:55		06:44 19:35	07:44 18:16	07:51 16:07
16	04:47 21:53	05:44 20:52		06:46 19:32	07:46 18:13	07:53 16:05
17	04:49 21:51	05:46 20:50		06:48 19:30	07:48 18:11	07:55 16:03
18	04:50 21:50	05:48 20:48		06:50 19:27	07:51 18:08	07:57 16:01
19	04:52 21:49	05:50 20:45		06:52 19:24	07:53 18:06	07:59 16:00
20	04:53 21:47	05:52 20:43		06:54 19:22	07:55 18:03	08:01 15:58
21	04:55 21:45	05:54 20:40		06:56 19:19	07:57 18:01	08:03 15:57
22	04:57 21:44	05:56 20:38		06:58 19:16	07:59 17:58	08:05 15:55
23	04:58 21:42	05:58 20:35		07:00 19:13	08:01 17:56	08:07 15:54
24	05:00 21:41	06:00 20:33		07:02 19:11	08:03 17:53	08:09 15:52
25	05:02 21:39	06:02 20:30		07:04 19:08	08:05 17:51	08:11 15:51
26	05:04 21:37	06:04 20:28		07:06 19:05	08:07 17:49	08:13 15:50
27	05:05 21:35	06:06 20:25		07:08 19:03	08:09 17:46	08:15 15:49
28	05:07 21:33	06:08 20:22		07:10 19:00	08:11 17:44	08:16 15:47
29	05:09 21:31	06:10 20:20		07:12 18:57	08:13 17:42	08:18 15:46
30	05:11 21:30	06:12 20:17		07:14 18:55	08:15 17:39	08:19 15:45
31	05:13 21:28	06:14 20:15			08:17 17:37	08:20 15:44
Potential sun hours	528	469	384	324	248	217
Total, worst case	484	35				
Sun reduction	0,47	0,52				
Oper. time red.	1,00	1,00				
Wind dir. red.	1,00	1,00				
Total reduction	0,47	0,52				
Total, real	228	18				

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

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Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Dubultnieki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (556)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:41
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:10	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:42	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:26	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:35	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: DzeniŠ i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (411)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January			February			March			April			May			June		
1	08:48	14:48 (P19.2b)	08:13				07:09	16:06 (DD3)	06:47	18:55 (O3)	05:31	04:35						
	15:47	16	15:04 (P19.2b)	16:44			17:46	32	16:38 (DD3)	19:51	23	19:18 (O3)	20:53	21:50				
2	08:48	14:49 (P19.2b)	08:11				07:06		16:07 (DD3)	06:44		18:55 (O3)	05:29	04:34				
	15:48	17	15:06 (P19.2b)	16:46			17:48	29	16:36 (DD3)	19:53	22	19:17 (O3)	20:55	21:51				
3	08:48	14:48 (P19.2b)	08:09				07:04		16:08 (DD3)	06:42		18:55 (O3)	05:27	04:33				
	15:50	19	15:07 (P19.2b)	16:48			17:50	28	16:36 (DD3)	19:55	23	19:18 (O3)	20:57	21:53				
4	08:47	14:49 (P19.2b)	08:07				07:01		16:09 (DD3)	06:39		18:55 (O3)	05:24	04:32				
	15:51	20	15:09 (P19.2b)	16:51			17:52	25	16:34 (DD3)	19:57	22	19:17 (O3)	20:59	21:54				
5	08:47	14:49 (P19.2b)	08:05				06:59		16:10 (DD3)	06:37		18:55 (O3)	05:22	04:31				
	15:52	20	15:09 (P19.2b)	16:53			17:55	22	16:32 (DD3)	19:59	21	19:16 (O3)	21:01	21:55				
6	08:46	14:49 (P19.2b)	08:03				06:56		16:13 (DD3)	06:34		18:56 (O3)	05:20	04:30				
	15:54	20	15:09 (P19.2b)	16:55			17:57	17	16:30 (DD3)	20:01	19	19:15 (O3)	21:03	21:57				
7	08:46	14:49 (P19.2b)	08:00				06:53		16:17 (DD3)	06:31		18:56 (O3)	05:18	04:29				
	15:55	21	15:10 (P19.2b)	16:57			17:59	8	16:25 (DD3)	20:04	17	19:13 (O3)	21:05	21:58				
8	08:45	14:49 (P19.2b)	07:58				06:51		17:27 (DD1)	06:29		18:58 (O3)	05:16	04:28				
	15:57	22	15:11 (P19.2b)	17:00			18:01	4	17:31 (DD1)	20:06	14	19:12 (O3)	21:07	21:59				
9	08:44	14:50 (P19.2b)	07:56			16:28 (O5)	06:48		17:23 (DD1)	06:26		19:00 (O3)	05:13	04:28				
	15:58	21	15:11 (P19.2b)	17:02	1	16:29 (O5)	18:03	12	17:35 (DD1)	20:08	8	19:08 (O3)	21:09	22:00				
10	08:44	14:50 (P19.2b)	07:54			16:24 (O5)	06:46		17:21 (DD1)	06:23		19:38 (O2)	05:11	04:27				
	16:00	22	15:12 (P19.2b)	17:04	8	16:32 (O5)	18:05	16	17:37 (DD1)	20:10	3	19:41 (O2)	21:11	22:01				
11	08:43	14:50 (P19.2b)	07:52			16:21 (O5)	06:43		17:19 (DD1)	06:21		19:34 (O2)	05:09	04:26				
	16:02	22	15:12 (P19.2b)	17:06	13	16:34 (O5)	18:07	19	17:38 (DD1)	20:12	8	19:42 (O2)	21:13	22:02				
12	08:42	14:51 (P19.2b)	07:50			16:20 (O5)	06:40		17:18 (DD1)	06:18		19:33 (O2)	05:07	04:26				
	16:03	22	15:13 (P19.2b)	17:08	17	16:37 (O5)	18:09	22	17:40 (DD1)	20:14	12	19:45 (O2)	21:15	22:03				
13	08:41	14:51 (P19.2b)	07:47			16:18 (DD3)	06:38		17:17 (DD1)	06:16		19:31 (O2)	05:05	04:25				
	16:05	23	15:14 (P19.2b)	17:11	21	16:39 (O5)	18:12	23	17:40 (DD1)	20:16	15	19:46 (O2)	21:17	22:03				
14	08:40	14:51 (P19.2b)	07:45			16:14 (DD3)	06:35		17:16 (DD1)	06:13		19:30 (O2)	05:03	04:25				
	16:07	22	15:13 (P19.2b)	17:13	26	16:40 (O5)	18:14	24	17:40 (DD1)	20:18	19	19:49 (O2)	21:19	22:04				
15	08:39	14:52 (P19.2b)	07:43			16:13 (DD3)	06:32		17:16 (DD1)	06:10		19:29 (O2)	05:01	04:25				
	16:09	22	15:14 (P19.2b)	17:15	27	16:40 (O5)	18:16	24	17:40 (DD1)	20:20	20	19:49 (O2)	21:21	22:05				
16	08:38	14:52 (P19.2b)	07:41			16:11 (DD3)	06:30		17:15 (DD1)	06:08		19:29 (O2)	04:59	04:25				
	16:11	22	15:14 (P19.2b)	17:17	29	16:40 (O5)	18:18	25	17:40 (DD1)	20:22	21	19:50 (O2)	21:23	22:05				
17	08:36	14:53 (P19.2b)	07:38			16:10 (DD3)	06:27		17:15 (DD1)	06:05		19:28 (O2)	04:58	04:24				
	16:13	22	15:15 (P19.2b)	17:20	31	16:41 (O5)	18:20	24	17:39 (DD1)	20:24	21	19:49 (O2)	21:25	22:06				
18	08:35	14:53 (P19.2b)	07:36			16:08 (DD3)	06:24		17:16 (DD1)	06:03		19:29 (O2)	04:56	04:24				
	16:15	21	15:14 (P19.2b)	17:22	32	16:40 (O5)	18:22	23	17:39 (DD1)	20:26	20	19:49 (O2)	21:27	22:06				
19	08:34	14:54 (P19.2b)	07:33			16:08 (DD3)	06:22		17:16 (DD1)	06:00		19:28 (O2)	04:54	04:24				
	16:16	21	15:15 (P19.2b)	17:24	32	16:40 (O5)	18:24	22	17:38 (DD1)	20:28	20	19:48 (O2)	21:29	22:07				
20	08:32	14:55 (P19.2b)	07:31			16:07 (DD3)	06:19		17:16 (DD1)	05:58		19:29 (O2)	04:52	04:24				
	16:18	19	15:14 (P19.2b)	17:26	32	16:39 (DD3)	18:26	20	17:36 (DD1)	20:30	18	19:47 (O2)	21:31	22:07				
21	08:31	14:55 (P19.2b)	07:29			16:07 (DD3)	06:16		17:18 (DD1)	05:55		19:30 (O2)	04:51	04:24				
	16:21	19	15:14 (P19.2b)	17:28	33	16:40 (DD3)	18:28	17	17:35 (DD1)	20:33	17	19:47 (O2)	21:32	22:07				
22	08:30	14:57 (P19.2b)	07:26			16:06 (DD3)	06:14		17:19 (DD1)	05:53		19:30 (O2)	04:49	04:25				
	16:23	17	15:14 (P19.2b)	17:31	34	16:40 (DD3)	18:30	14	17:33 (DD1)	20:35	15	19:45 (O2)	21:34	22:08				
23	08:28	14:58 (P19.2b)	07:24			16:06 (DD3)	06:11		17:22 (DD1)	05:50		19:32 (O2)	04:47	04:25				
	16:25	15	15:13 (P19.2b)	17:33	34	16:40 (DD3)	18:32	7	17:29 (DD1)	20:37	11	19:43 (O2)	21:36	22:08				
24	08:27	15:00 (P19.2b)	07:21			16:05 (DD3)	06:08			05:48		19:36 (O2)	04:46	04:25				
	16:27	12	15:12 (P19.2b)	17:35	35	16:40 (DD3)	18:35			20:39	4	19:40 (O2)	21:38	22:08				
25	08:25	15:02 (P19.2b)	07:19			16:05 (DD3)	06:06			05:45			04:44	04:25				
	16:29	8	15:10 (P19.2b)	17:37	34	16:39 (DD3)	18:37			20:41			21:39	22:08				
26	08:23		07:16			16:05 (DD3)	06:03		18:06 (O3)	05:43			04:43	04:26				
	16:31		17:39	34	16:39 (DD3)	18:39		5	18:11 (O3)	20:43			21:41	22:08				
27	08:22		07:14			16:05 (DD3)	06:00		18:02 (O3)	05:41			04:41	04:26				
	16:33		17:42	34	16:39 (DD3)	18:41	10		18:12 (O3)	20:45			21:43	22:08				
28	08:20		07:11			16:06 (DD3)	05:58		18:00 (O3)	05:38			04:40	04:27				
	16:35		17:44	33	16:39 (DD3)	18:43	15		18:15 (O3)	20:47			21:44	22:07				
29	08:18					06:55			18:58 (O3)	05:36			04:39	04:28				
	16:37					19:45	19		19:17 (O3)	20:49			21:46	22:07				
30	08:16					06:52			18:57 (O3)	05:34			04:37	04:28				
	16:40					19:47	20		19:17 (O3)	20:51			21:47	22:07				
31	08:14					06:50			18:56 (O3)				04:36					
	16:42					19:49	22		19:18 (O3)				21:49					
Potential sun hours	236			266			366			426			507		528			
Total, worst case		485			540			548			393							
Sun reduction		0,13			0,22			0,39			0,44							
Oper. time red.		1,00			1,00			1,00			1,00							
Wind dir. red.		1,00			1,00			1,00			1,00							
Total reduction		0,13			0,22			0,39			0,44							
Total, real		65			121			215			174							

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: DzeniŠ i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (411)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December					
1	04:29 22:06	05:14 21:26	06:16 20:12	19:33 (O2) 19:41 (O2)	07:15 18:19 (DD1)	17:57 (DD1) 16:35	15:54 (O5) 16:01 (O5)	08:22 15:44	23	14:32 (P19.2b) 14:55 (P19.2b)	
2	04:30 22:06	05:16 21:24	06:18 20:09	19:36 (O2) 19:39 (O2)	07:17 18:49	17:57 (DD1) 18:18 (DD1)	07:23 16:32	08:23 15:43	22	14:33 (P19.2b) 14:55 (P19.2b)	
3	04:31 22:05	05:18 21:21	06:20 20:07	18:58 (O3) 19:06 (O3)	07:20 18:47	17:58 (DD1) 18:16 (DD1)	07:25 16:30	08:25 15:42	21	14:34 (P19.2b) 14:55 (P19.2b)	
4	04:32 22:05	05:20 21:19	06:22 20:04	18:55 (O3) 19:09 (O3)	07:22 18:44	17:59 (DD1) 18:13 (DD1)	07:27 16:28	08:27 15:41	22	14:34 (P19.2b) 14:56 (P19.2b)	
5	04:33 22:04	05:22 21:17	06:24 20:02	18:53 (O3) 19:10 (O3)	07:24 18:41	18:02 (DD1) 18:10 (DD1)	07:29 16:26	08:28 15:41	21	14:34 (P19.2b) 14:55 (P19.2b)	
6	04:34 22:03	05:24 21:15	06:26 19:59	18:52 (O3) 19:11 (O3)	07:26 18:39	18:02 (DD1) 16:24	07:31 16:24	08:30 15:40	21	14:35 (P19.2b) 14:56 (P19.2b)	
7	04:35 22:03	05:26 21:13	06:28 19:56	18:51 (O3) 19:11 (O3)	07:28 18:36	16:50 (DD3) 17:03 (DD3)	07:33 16:22	08:31 15:39	20	14:36 (P19.2b) 14:56 (P19.2b)	
8	04:36 22:02	05:28 21:11	06:30 19:54	18:50 (O3) 19:12 (O3)	07:30 18:33	16:47 (DD3) 17:06 (DD3)	07:36 16:20	08:33 15:39	20	14:36 (P19.2b) 14:56 (P19.2b)	
9	04:37 22:01	05:30 21:08	06:32 19:51	18:49 (O3) 19:12 (O3)	07:32 18:31	16:45 (DD3) 17:08 (DD3)	07:38 16:18	08:34 15:38	18	14:38 (P19.2b) 14:56 (P19.2b)	
10	04:38 22:00	05:32 21:06	06:34 19:48	18:48 (O3) 19:11 (O3)	07:34 18:28	16:43 (DD3) 17:09 (DD3)	07:40 16:16	08:35 15:38	17	14:38 (P19.2b) 14:55 (P19.2b)	
11	04:40 21:59	05:34 21:04	06:36 19:46	18:48 (O3) 19:10 (O3)	07:36 18:26	16:42 (DD3) 17:10 (DD3)	07:42 16:14	08:37 15:37	16	14:39 (P19.2b) 14:55 (P19.2b)	
12	04:41 21:58	05:36 21:02	06:38 19:43	18:48 (O3) 19:10 (O3)	07:38 18:23	16:40 (DD3) 17:10 (DD3)	07:44 16:12	08:38 15:37	15	14:40 (P19.2b) 14:55 (P19.2b)	
13	04:42 21:57	05:38 20:59	06:40 19:40	18:48 (O3) 19:09 (O3)	07:40 18:21	16:39 (DD3) 17:11 (DD3)	07:46 16:10	08:39 15:37	14	14:40 (P19.2b) 14:54 (P19.2b)	
14	04:44 21:55	05:40 20:57	06:42 19:38	18:48 (O3) 19:07 (O3)	07:42 18:18	16:38 (DD3) 17:11 (DD3)	07:48 16:08	08:40 15:37	13	14:41 (P19.2b) 14:54 (P19.2b)	
15	04:45 21:54	05:42 20:55	06:44 19:35	18:49 (O3) 19:05 (O3)	07:44 18:15	16:38 (DD3) 17:12 (DD3)	07:51 16:06	08:41 15:37	13	14:41 (P19.2b) 14:54 (P19.2b)	
16	04:47 21:53	05:44 20:52	06:46 19:32	18:51 (O3) 19:02 (O3)	07:46 18:13	16:37 (DD3) 17:12 (DD3)	07:53 16:05	08:42 15:37	11	14:42 (P19.2b) 14:53 (P19.2b)	
17	04:48 21:51	05:46 20:50	06:48 19:29	18:53 (O3) 19:00 (O3)	07:48 18:10	16:37 (DD3) 17:11 (DD3)	07:55 16:03	14:36 (P19.2b) 14:44 (P19.2b)	08:43 15:37	11	14:43 (P19.2b) 14:54 (P19.2b)
18	04:50 21:50	05:48 20:47	06:49 19:27	18:55 (O3) 19:00 (O3)	07:50 18:08	16:36 (DD3) 17:11 (DD3)	07:57 16:01	14:34 (P19.2b) 14:46 (P19.2b)	08:44 15:37	10	14:44 (P19.2b) 14:54 (P19.2b)
19	04:51 21:49	05:50 20:45	06:51 19:24	18:57 (O3) 19:06 (O2)	07:53 18:05	16:37 (DD3) 17:11 (DD3)	07:59 16:00	14:32 (P19.2b) 14:47 (P19.2b)	08:45 15:37	10	14:44 (P19.2b) 14:54 (P19.2b)
20	04:53 21:47	05:52 20:43	06:53 19:21	18:10 (DD1) 18:14 (DD1)	07:55 18:03	16:37 (DD3) 17:11 (DD3)	08:01 15:58	14:32 (P19.2b) 14:49 (P19.2b)	08:45 15:38	10	14:44 (P19.2b) 14:54 (P19.2b)
21	04:55 21:45	05:54 20:40	06:55 19:19	18:05 (DD1) 18:18 (DD1)	07:57 18:00	16:37 (DD3) 17:10 (DD3)	08:03 15:56	14:31 (P19.2b) 14:50 (P19.2b)	08:46 15:38	10	14:45 (P19.2b) 14:55 (P19.2b)
22	04:56 21:44	05:56 20:38	06:57 19:16	18:03 (DD1) 18:20 (DD1)	07:59 17:58	16:37 (DD3) 17:10 (O5)	08:05 15:55	14:31 (P19.2b) 14:50 (P19.2b)	08:47 15:38	10	14:45 (P19.2b) 14:55 (P19.2b)
23	04:58 21:42	05:58 20:35	06:59 19:13	18:01 (DD1) 18:21 (DD1)	08:01 17:56	16:38 (DD3) 17:11 (O5)	08:07 15:54	14:30 (P19.2b) 14:51 (P19.2b)	08:47 15:39	10	14:46 (P19.2b) 14:56 (P19.2b)
24	05:00 21:41	06:00 20:33	07:01 19:11	18:00 (DD1) 18:21 (DD1)	08:03 17:53	16:39 (DD3) 17:10 (O5)	08:09 15:52	14:31 (P19.2b) 14:52 (P19.2b)	08:47 15:40	10	14:46 (P19.2b) 14:56 (P19.2b)
25	05:02 21:39	06:02 20:30	07:03 19:08	17:59 (DD1) 18:22 (DD1)	07:05 16:51	15:39 (DD3) 16:10 (O5)	08:11 15:51	14:31 (P19.2b) 14:53 (P19.2b)	08:48 15:40	11	14:46 (P19.2b) 14:57 (P19.2b)
26	05:03 21:37	06:04 20:27	07:05 19:05	17:58 (DD1) 18:22 (DD1)	07:07 16:48	15:41 (DD3) 16:11 (O5)	08:13 15:50	14:31 (P19.2b) 14:53 (P19.2b)	08:48 15:41	10	14:47 (P19.2b) 14:57 (P19.2b)
27	05:05 21:35	06:06 20:25	07:07 19:03	17:57 (DD1) 18:22 (DD1)	07:10 16:46	15:43 (DD3) 16:10 (O5)	08:15 15:48	14:31 (P19.2b) 14:53 (P19.2b)	08:48 15:42	11	14:48 (P19.2b) 14:59 (P19.2b)
28	05:07 21:33	06:08 20:22	07:09 19:00	17:57 (DD1) 18:21 (DD1)	07:12 16:44	15:44 (DD3) 16:09 (O5)	08:16 15:47	14:31 (P19.2b) 14:54 (P19.2b)	08:48 15:43	12	14:47 (P19.2b) 14:59 (P19.2b)
29	05:09 21:31	06:10 20:20	07:11 18:57	17:57 (DD1) 18:21 (DD1)	07:14 16:41	15:48 (DD3) 16:08 (O5)	08:18 15:46	14:32 (P19.2b) 14:54 (P19.2b)	08:48 15:44	12	14:48 (P19.2b) 15:00 (P19.2b)
30	05:11 21:30	06:12 20:17	07:13 18:55	17:57 (DD1) 18:20 (DD1)	07:16 16:39	15:50 (O5) 16:06 (O5)	08:20 15:45	14:32 (P19.2b) 14:54 (P19.2b)	08:48 15:45	14	14:48 (P19.2b) 15:02 (P19.2b)
31	05:13 21:28	06:14 20:15	07:15 19:44 (O2)		07:18 16:37	15:51 (O5) 16:03 (O5)		08:48 15:46	15	14:48 (P19.2b) 15:03 (P19.2b)	
Potential sun hours	528	469	384		324	248		217			
Total, worst case		217	493		784	272		453			
Sun reduction		0,52	0,43		0,29	0,08		0,08			
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		0,52	0,43		0,29	0,08		0,08			
Total, real		113	213		227	20		38			

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Dzeni - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (513)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Dzintarnieki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (559)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:41
5	08:47	08:04	06:58	06:36	05:22	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:55	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:39
8	08:45	07:58	06:50	06:28	05:15	04:28	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:57	04:52	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:41	04:26	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:35	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:28	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Dzirnava - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (568)  
Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:47	16:43	17:46	19:51	20:53	21:50	22:06	21:25	20:12	18:52	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:42
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:41
5	08:47	08:04	06:58	06:36	05:22	04:30	04:32	05:22	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:24	06:25	07:25	07:31	08:30
	15:53	16:55	17:56	20:01	21:03	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:26	06:27	07:27	07:33	08:31
	15:55	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:39
8	08:45	07:58	06:51	06:28	05:15	04:28	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:26	05:13	04:27	04:37	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:38
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:04	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:43	18:23	16:11	15:37
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:05	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:18	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:24	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:24	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:57	04:52	04:24	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:58	15:54	15:38
23	08:28	07:24	06:11	05:50	04:47	04:24	04:58	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:52	15:39
25	08:25	07:19	06:05	05:45	04:44	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:40
26	08:23	07:16	06:03	05:43	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:41	04:26	05:05	06:05	07:07	08:09	08:14	08:48
	16:33	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:46	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:35	17:43	18:43	20:47	21:44	22:07	21:33	20:22	19:00	16:43	15:47	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:37	04:28	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:48		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Dzitari - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (495)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12	07:09	06:47	05:31	19:56 (AP2)	04:34	04:28	05:14	20:06 (AP2)	06:15	07:15	07:20	08:22		
	15:46	16:43	17:46	19:51	20:53	20:18 (AP2)	21:50	22:06	21:25	37	20:43 (AP6.1)	20:12	18:52	16:34	15:43	
2	08:48	08:10	07:06	06:44	05:28	19:55 (AP2)	04:33	04:29	05:16	20:06 (AP2)	06:17	07:17	07:22	08:23		
	15:48	16:46	17:48	19:53	20:55	28	20:23 (AP6.1)	21:51	22:06	21:23	37	20:43 (AP6.1)	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	19:55 (AP2)	04:32	04:30	05:18	20:05 (AP2)	06:19	07:19	07:25	08:25		
	15:49	16:48	17:50	19:55	20:57	30	20:25 (AP6.1)	21:53	22:05	21:21	39	20:44 (AP6.1)	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	19:55 (AP2)	04:31	04:31	05:20	20:05 (AP2)	06:21	07:21	07:27	08:27		
	15:50	16:50	17:52	19:57	20:59	32	20:27 (AP6.1)	21:54	22:05	21:19	39	20:44 (AP6.1)	20:04	18:44	16:27	15:41
5	08:47	08:04	06:58	06:36	05:22	19:55 (AP2)	04:30	04:32	05:22	20:05 (AP2)	06:23	07:23	07:29	08:28		
	15:52	16:52	17:54	19:59	21:01	34	20:29 (AP6.1)	21:55	22:04	21:17	39	20:44 (AP6.1)	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	19:55 (AP2)	04:29	04:33	05:23	20:04 (AP2)	06:25	07:25	07:31	08:30		
	15:53	16:54	17:56	20:01	21:03	35	20:30 (AP6.1)	21:56	22:03	21:15	37	20:41 (AP6.1)	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	19:55 (AP2)	04:28	04:34	05:25	20:04 (AP2)	06:27	07:27	07:33	08:31		
	15:55	16:57	17:58	20:03	21:05	37	20:32 (AP6.1)	21:58	22:03	21:13	35	20:39 (AP6.1)	19:56	18:36	16:21	15:39
8	08:45	07:58	06:51	06:28	05:15	19:55 (AP2)	04:28	04:35	05:27	20:04 (AP2)	06:29	07:29	07:35	08:33		
	15:56	16:59	18:01	20:05	21:07	38	20:33 (AP6.1)	21:59	22:02	21:11	33	20:37 (AP6.1)	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:26	05:13	19:55 (AP2)	04:27	04:36	05:29	20:04 (AP2)	06:31	07:31	07:38	08:34		
	15:58	17:01	18:03	20:07	21:09	38	20:33 (AP6.1)	22:00	22:01	21:08	31	20:35 (AP6.1)	19:51	18:30	16:17	15:38
10	08:44	07:54	06:45	06:23	05:11	19:55 (AP2)	04:26	04:38	05:31	20:05 (AP2)	06:33	07:33	07:40	08:35		
	15:59	17:03	18:05	20:09	21:11	38	20:33 (AP6.1)	22:01	22:00	21:06	29	20:34 (AP6.1)	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	19:56 (AP2)	04:26	04:39	05:33	20:04 (AP2)	06:35	07:36	07:42	08:37		
	16:01	17:06	18:07	20:12	21:13	37	20:33 (AP6.1)	22:02	21:59	21:04	26	20:31 (AP6.1)	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	19:56 (AP2)	04:25	04:40	05:35	20:05 (AP2)	06:37	07:38	07:44	08:38		
	16:03	17:08	18:09	20:14	21:15	37	20:33 (AP6.1)	22:03	21:58	21:01	22	20:27 (AP2)	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	19:58 (AP2)	04:25	04:42	05:37	20:05 (AP2)	06:39	07:40	07:46	08:39		
	16:05	17:10	18:11	20:16	21:17	35	20:33 (AP6.1)	22:03	21:57	20:59	21	20:26 (AP2)	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	19:59 (AP2)	04:24	04:43	05:39	20:06 (AP2)	06:41	07:42	07:48	08:40		
	16:06	17:12	18:13	20:18	21:19	33	20:32 (AP6.1)	22:04	21:55	20:57	19	20:25 (AP2)	19:37	18:17	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	20:00 (AP2)	04:24	04:45	05:41	20:08 (AP2)	06:43	07:44	07:50	08:41		
	16:08	17:15	18:15	20:20	21:21	29	20:31 (AP6.1)	22:05	21:54	20:54	14	20:22 (AP2)	19:34	18:15	16:06	15:36
16	08:38	07:40	06:29	06:07	04:59	20:01 (AP2)	04:24	04:46	05:43	20:09 (AP2)	06:45	07:46	07:53	08:42		
	16:10	17:17	18:18	20:22	21:23	25	20:30 (AP6.1)	22:05	21:53	20:52	11	20:20 (AP2)	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	20:05 (AP2)	04:24	04:48	05:45	20:13 (AP2)	06:47	07:48	07:55	08:43		
	16:12	17:19	18:20	20:24	21:25	17	20:30 (AP6.1)	22:06	21:51	20:50	5	20:18 (AP2)	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	20:18 (AP6.1)	04:24	04:49	05:47	20:07	06:49	07:50	07:57	08:44		
	16:14	17:21	18:22	20:26	21:27	11	20:29 (AP6.1)	22:06	21:50	20:47	19	20:26	18:07	16:01	15:36	
19	08:34	07:33	06:21	06:00	04:53	20:20 (AP6.1)	04:23	04:51	05:49	20:05	06:51	07:52	07:59	08:45		
	16:16	17:24	18:24	20:28	21:29	7	20:27 (AP6.1)	22:07	21:48	20:45	19	20:24	18:05	15:59	15:37	
20	08:32	07:31	06:19	05:57	04:52	20:24	04:24	04:52	05:51	20:04	06:53	07:54	08:01	08:45		
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	20:42	19:21	18:02	15:57	15:37			
21	08:31	07:28	06:16	05:55	04:50	20:24	04:54	04:54	05:53	20:05	06:55	07:57	08:03	08:46		
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	20:40	19:18	18:00	15:56	15:37			
22	08:29	07:26	06:13	05:52	04:48	20:24	04:56	04:56	05:55	20:06	06:57	07:59	08:05	08:47		
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	20:37	19:16	17:57	15:54	15:38			
23	08:28	07:24	06:11	05:50	04:47	20:24	04:57	04:57	05:57	20:07	06:59	08:01	08:07	08:47		
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	20:35	19:13	17:55	15:53	15:38			
24	08:26	07:21	06:08	05:47	04:45	20:24	04:59	04:59	05:59	20:08	07:01	08:03	08:09	08:47		
	16:26	17:35	18:34	20:39	21:37	22:08	21:40	20:32	20:32	19:10	17:53	15:51	15:39			
25	08:25	07:19	06:05	05:45	04:43	20:25	05:01	05:01	06:01	20:09	07:03	07:05	08:11	08:48		
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	20:30	19:08	16:50	15:50	15:40			
26	08:23	07:16	06:03	05:42	20:04 (AP2)	04:42	05:03	05:03	06:03	20:07	07:05	07:07	08:13	08:48		
	16:30	17:39	18:38	20:43	7	20:11 (AP2)	21:41	22:08	21:37	12	20:39 (AP6.1)	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	20:01 (AP2)	04:41	04:26	05:05	05:05	20:14 (AP2)	06:05	07:07	07:09	08:14	08:48	
	16:32	17:41	18:40	20:45	12	20:13 (AP2)	21:42	22:08	21:35	21	20:41 (AP6.1)	20:25	19:02	16:46	15:48	15:41
28	08:20	07:11	05:57	05:38	20:00 (AP2)	04:39	04:26	05:06	05:06	20:12 (AP2)	06:07	07:09	07:12	08:16	08:48	
	16:35	17:43	18:43	20:47	15	20:15 (AP2)	21:44	22:07	21:33	27	20:42 (AP6.1)	20:22	19:00	16:43	15:46	15:42
29	08:18		06:55	05:35	19:59 (AP2)	04:38	04:27	05:08	05:08	20:09 (AP2)	06:09	07:11	07:14	08:18	08:48	
	16:37		19:45	20:49	19	20:18 (AP2)	21:46	22:07	21:31	32	20:42 (AP6.1)	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	19:57 (AP2)	04:37	04:28	05:10	05:10	20:08 (AP2)	06:11	07:13	07:16	08:20	08:48	
	16:39		19:47	20:51	21	20:18 (AP2)	21:47	22:07	21:29	35	20:43 (AP6.1)	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49			04:35	04:28	05:12	05:12	20:08 (AP2)	06:13	07:18	07:21	08:25	08:48	
	16:41		19:49			21:49	21:27	21:27	21:27	35	20:43 (AP6.1)	20:14	18:54	16:36	15:45	15:45
Potential sun hours	236	266	366	426	507	528	529	469		384	324	248	217			
Total, worst case				74	563			174		474						
Sun reduction				0,44	0,56			0,47		0,52						
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	0,56			0,47		0,52						
Total, real				33	317			82		247						

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Darzini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (471)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:49	08:13	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:46	19:51	20:53	21:50	22:07	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:23	08:24
	15:47	16:45	17:48	19:53	20:55	21:52	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:04	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:22	20:07	18:46	16:30	15:41
4	08:48	08:07	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:20	20:04	18:44	16:27	15:40
5	08:47	08:05	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:29
	15:51	16:52	17:54	19:59	21:02	21:56	22:05	21:17	20:01	18:41	16:25	15:40
6	08:47	08:03	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:04	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:01	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:34	08:32
	15:54	16:57	17:58	20:03	21:06	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:35	05:27	06:29	07:30	07:36	08:33
	15:56	16:59	18:01	20:05	21:08	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:45	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:32	07:38	08:34
	15:58	17:01	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:34	07:40	08:36
	15:59	17:03	18:05	20:10	21:12	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:50	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:18	22:04	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:49	08:40
	16:06	17:12	18:13	20:18	21:20	22:04	21:56	20:57	19:37	18:18	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:51	08:42
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:36
16	08:38	07:41	06:30	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:18	20:22	21:23	22:06	21:53	20:52	19:32	18:12	16:04	15:36
17	08:37	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:27	18:07	16:00	15:36
19	08:34	07:33	06:22	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:55	08:01	08:46
	16:18	17:26	18:26	20:30	21:31	22:08	21:47	20:43	19:21	18:02	15:57	15:37
21	08:31	07:29	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:57	15:54	15:38
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:27	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:35	18:34	20:39	21:38	22:08	21:41	20:33	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:40	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:22	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:15	08:49
	16:32	17:41	18:41	20:45	21:43	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:17	08:49
	16:34	17:43	18:43	20:47	21:44	22:08	21:34	20:22	19:00	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:08	21:32	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:30	20:17	18:54	16:39	15:44	15:44
31	08:15		06:49		04:35		05:12	06:13		07:18		08:49
	16:41		19:49		21:49		21:28	20:15		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	385	324	248	216
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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Darznieki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (435)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:13 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:07	05:14 21:26	06:16 20:12	07:16 18:52	07:21 16:35	08:22 15:44
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:34 21:52	04:30 22:06	05:16 21:24	06:18 20:10	07:18 18:49	07:23 16:32	08:24 15:43
3	08:48 15:49	08:09 16:48	07:04 17:50	06:42 19:55	05:27 20:58	04:33 21:53	04:31 22:06	05:18 21:22	06:20 20:07	07:20 18:47	07:25 16:30	08:25 15:42
4	08:48 15:51	08:07 16:51	07:01 17:52	06:39 19:57	05:24 21:00	04:32 21:54	04:32 22:05	05:20 21:20	06:22 20:04	07:22 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:53	06:59 17:55	06:37 19:59	05:22 21:02	04:31 21:56	04:33 22:04	05:22 21:17	06:24 20:02	07:24 18:41	07:29 16:26	08:29 15:40
6	08:47 15:54	08:03 16:55	06:56 17:57	06:34 20:02	05:20 21:04	04:30 21:57	04:34 22:04	05:24 21:15	06:26 20:00	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:55	08:01 16:57	06:54 17:59	06:31 20:04	05:18 21:06	04:29 21:58	04:35 22:03	05:26 21:13	06:28 20:00	07:28 18:36	07:34 16:22	08:32 15:39
8	08:45 15:57	07:59 16:59	06:51 18:01	06:29 20:06	05:16 21:08	04:28 21:59	04:36 22:02	05:28 21:11	06:30 20:04	07:30 18:33	07:36 16:20	08:33 15:39
9	08:45 15:58	07:56 17:02	06:48 18:03	06:26 20:08	05:13 21:10	04:27 22:00	04:37 22:01	05:30 21:09	06:32 20:00	07:32 18:31	07:38 16:18	08:34 15:38
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:12	04:27 22:01	04:38 22:00	05:32 21:06	06:34 20:00	07:34 18:28	07:40 16:16	08:36 15:38
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:14	04:26 22:02	04:40 21:59	05:34 21:04	06:36 20:00	07:36 18:26	07:42 16:14	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:10	06:18 20:14	05:07 21:16	04:26 22:03	04:41 21:58	05:36 21:02	06:38 20:00	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:48 17:11	06:38 18:12	06:16 20:16	05:05 21:18	04:25 22:04	04:42 21:57	05:38 21:00	06:40 20:00	07:40 18:21	07:47 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:20	04:25 22:04	04:44 21:56	05:40 20:57	06:42 20:00	07:42 18:18	07:49 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:25 22:05	04:45 21:54	05:42 20:55	06:44 20:00	07:44 18:15	07:51 16:06	08:41 15:37
16	08:38 16:11	07:41 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:06	04:47 21:53	05:44 20:52	06:46 20:00	07:46 18:13	07:53 16:05	08:42 15:37
17	08:37 16:12	07:38 17:20	06:27 18:20	06:05 20:24	04:58 21:25	04:24 22:06	04:48 21:52	05:46 20:50	06:48 20:00	07:48 18:10	07:55 16:03	08:43 15:37
18	08:35 16:14	07:36 17:22	06:25 18:22	06:03 20:26	04:56 21:27	04:24 22:07	04:50 21:50	05:48 20:48	06:50 20:00	07:51 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:34 17:24	06:22 18:24	06:00 20:29	04:54 21:29	04:24 22:07	04:51 21:49	05:50 20:45	06:52 20:00	07:53 18:05	07:59 15:59	08:45 15:37
20	08:33 16:18	07:31 17:26	06:19 18:26	05:58 20:31	04:52 21:31	04:24 22:07	04:53 21:47	05:52 20:43	06:53 20:00	07:55 18:03	08:01 15:58	08:46 15:37
21	08:31 16:20	07:29 17:28	06:17 18:28	05:55 20:33	04:50 21:33	04:24 22:08	04:55 21:46	05:54 20:40	06:55 20:00	07:57 18:00	08:03 15:56	08:46 15:38
22	08:30 16:22	07:26 17:31	06:14 18:30	05:53 20:35	04:49 21:34	04:24 22:08	04:56 21:44	05:56 20:38	06:57 20:00	07:59 18:00	08:05 15:55	08:47 15:38
23	08:28 16:25	07:24 17:33	06:11 18:33	05:50 20:37	04:47 21:36	04:25 22:08	04:58 21:42	05:58 20:35	06:59 20:00	08:01 18:00	08:07 15:53	08:47 15:39
24	08:27 16:27	07:21 17:35	06:09 18:35	05:48 20:39	04:46 21:38	04:25 22:08	05:00 21:41	06:00 20:33	07:01 20:00	08:03 18:00	08:09 15:52	08:48 15:39
25	08:25 16:29	07:19 17:37	06:06 18:37	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:02 20:30	07:03 20:00	08:05 18:00	08:11 15:51	08:48 15:40
26	08:23 16:31	07:16 17:39	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:03 21:37	06:04 20:28	07:05 20:00	08:07 18:00	08:13 15:49	08:48 15:41
27	08:22 16:33	07:14 17:42	06:00 18:41	05:41 20:45	04:41 21:43	04:26 22:08	05:05 21:35	06:06 20:25	07:07 20:00	08:09 18:00	08:15 15:48	08:49 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:08	05:07 21:34	06:08 20:22	07:09 20:00	08:12 18:00	08:17 15:47	08:49 15:43
29	08:18 16:37		06:55 19:45	05:36 20:49	04:38 21:46	04:27 22:07	05:09 21:32	06:10 20:20	07:11 20:00	08:14 18:00	08:18 15:46	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:11 21:30	06:12 20:17	07:14 20:00	08:20 18:00	08:25 15:45	08:49 15:44
31	08:15 16:42		06:50 19:49		04:36 21:49		05:12 21:28	06:14 20:15	07:18 20:00	08:25 18:00		08:49 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Elsti - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (507)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:41
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:10	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
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11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
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	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:47	05:45	06:47	07:48	07:55	08:43
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18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
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	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
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	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
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27	08:21	07:14	06:00	05:40	04:40	04:26	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:35	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Elviras - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (578)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:29 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:07	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:34 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:24 21:15	06:25 20:01	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:17 21:05	04:29 21:58	04:34 22:03	05:26 21:13	06:27 20:01	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:28 21:11	06:29 20:01	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:37 22:01	05:30 21:08	06:31 20:01	07:31 18:30	07:38 16:17	08:34 15:38
10	08:43 16:00	07:54 17:04	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 20:01	07:34 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 20:01	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:02	04:40 21:58	05:35 21:01	06:37 20:01	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:56	05:37 20:59	06:39 20:01	07:40 18:20	07:46 16:10	08:39 15:36
14	08:40 16:06	07:45 17:13	06:35 18:13	06:13 20:18	05:03 21:19	04:25 22:04	04:43 21:55	05:39 20:57	06:41 20:01	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:54	06:43 20:01	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:18	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 20:01	07:46 18:12	07:52 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 20:01	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 20:01	07:50 18:07	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:21 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:48	05:49 20:45	06:51 20:01	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:30	04:24 22:07	04:53 21:47	05:51 20:42	06:53 20:01	07:54 18:02	08:01 15:58	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 20:01	07:57 18:00	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:07	04:56 21:44	05:55 20:37	06:57 20:01	07:59 17:58	08:05 15:54	08:46 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	04:47 21:36	04:24 22:08	04:58 21:42	05:57 20:35	06:59 20:01	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:25 22:08	04:59 21:40	05:59 20:32	07:01 20:01	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 20:01	08:05 17:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 20:01	08:07 17:48	08:13 15:49	08:48 15:40
27	08:21 16:33	07:14 17:41	06:00 18:40	05:40 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:05 20:25	07:07 20:01	08:09 17:46	08:14 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:57 18:43	05:38 20:47	04:39 21:44	04:26 22:07	05:07 21:33	06:07 20:22	07:09 20:01	08:12 17:43	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 20:01	08:14 17:41	08:18 15:46	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 20:01	08:16 17:39	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:48		05:12 21:27	06:13 20:14	07:18 20:01	08:18 17:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Fridrisgofa - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (436)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:15 21:25	06:16 20:12	07:15 18:52	07:20 16:35	08:22 15:44
2	08:48 15:49	08:10 16:46	07:06 17:48	06:45 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:17 21:23	06:18 20:09	07:18 18:49	07:23 16:33	08:23 15:43
3	08:48 15:50	08:09 16:49	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:18 21:21	06:20 20:07	07:20 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:51	07:01 17:53	06:39 19:57	05:25 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:22 18:44	07:27 16:28	08:27 15:42
5	08:47 15:53	08:05 16:53	06:59 17:55	06:37 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:01	07:24 18:41	07:29 16:26	08:28 15:41
6	08:46 15:54	08:02 16:55	06:56 17:57	06:34 20:01	05:20 21:03	04:30 21:56	04:34 22:03	05:24 21:15	06:26 19:59	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:56	08:00 16:57	06:53 17:59	06:31 20:04	05:18 21:05	04:29 21:57	04:35 22:02	05:26 21:13	06:28 19:56	07:28 18:36	07:33 16:22	08:31 15:40
8	08:45 15:57	07:58 17:00	06:51 18:01	06:29 20:06	05:16 21:07	04:29 21:59	04:36 22:02	05:28 21:11	06:30 19:54	07:30 18:34	07:36 16:20	08:33 15:39
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11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:10 21:13	04:27 22:01	04:40 21:59	05:34 21:04	06:36 19:46	07:36 18:26	07:42 16:14	08:37 15:38
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26	08:23 16:31	07:16 17:40	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:04 21:37	06:04 20:27	07:05 19:05	08:07 17:49	08:13 15:50	08:48 15:41
27	08:21 16:33	07:14 17:42	06:01 18:41	05:41 20:45	04:42 21:42	04:27 22:07	05:05 21:35	06:06 20:25	07:07 19:03	08:09 17:46	08:14 15:49	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:09 19:00	08:12 17:44	08:16 15:47	08:48 15:43
29	08:18 16:38		06:55 19:45	05:36 20:49	04:39 21:45	04:28 22:07	05:09 21:31	06:10 20:20	07:11 18:57	08:14 17:42	08:18 15:46	08:48 15:44
30	08:16 16:40		06:53 19:47	05:34 20:51	04:38 21:47	04:29 22:07	05:11 21:29	06:12 20:17	07:13 18:55	08:16 17:39	08:20 15:45	08:48 15:45
31	08:14 16:42		06:50 19:49		04:36 21:48		05:13 21:27	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	527	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Gabri - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (551)  
Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:27	15:41
5	08:47	08:04	06:58	06:36	05:22	04:30	04:32	05:22	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:55	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:39
8	08:45	07:58	06:50	06:28	05:15	04:28	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:57	04:52	04:24	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:24	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:41	04:26	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:35	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:37	04:28	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Gaitnieki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (446)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:13	07:09	06:47	05:31	04:35	04:29	05:15	06:16	07:16	07:20	08:22
	15:47	16:44	17:46	19:51	20:53	21:50	22:06	21:26	20:12	18:52	16:35	15:44
2	08:48	08:11	07:06	06:45	05:29	04:34	04:30	05:17	06:18	07:18	07:23	08:23
	15:49	16:46	17:48	19:53	20:55	21:51	22:06	21:24	20:09	18:49	16:33	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:18	06:20	07:20	07:25	08:25
	15:50	16:49	17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:47	16:30	15:42
4	08:47	08:07	07:01	06:39	05:25	04:32	04:32	05:20	06:22	07:22	07:27	08:27
	15:51	16:51	17:53	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:41
5	08:47	08:05	06:59	06:37	05:22	04:31	04:33	05:22	06:24	07:24	07:29	08:28
	15:53	16:53	17:55	19:59	21:01	21:55	22:04	21:17	20:02	18:41	16:26	15:41
6	08:46	08:03	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:02	21:03	21:56	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:01	06:53	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:33	08:31
	15:55	16:57	17:59	20:04	21:05	21:58	22:03	21:13	19:56	18:36	16:22	15:39
8	08:45	07:58	06:51	06:29	05:16	04:28	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	17:00	18:01	20:06	21:07	21:59	22:02	21:11	19:54	18:34	16:20	15:39
9	08:44	07:56	06:48	06:26	05:14	04:28	04:37	05:30	06:32	07:32	07:38	08:34
	15:59	17:02	18:03	20:08	21:09	22:00	22:01	21:08	19:51	18:31	16:18	15:38
10	08:44	07:54	06:46	06:23	05:12	04:27	04:39	05:32	06:34	07:34	07:40	08:35
	16:00	17:04	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:09	04:27	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:46	18:26	16:14	15:38
12	08:42	07:50	06:40	06:18	05:07	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:04	17:09	18:10	20:14	21:15	22:02	21:58	21:02	19:43	18:23	16:12	15:37
13	08:41	07:47	06:38	06:16	05:05	04:26	04:43	05:38	06:40	07:40	07:46	08:39
	16:05	17:11	18:12	20:16	21:17	22:03	21:57	20:59	19:40	18:21	16:10	15:37
14	08:40	07:45	06:35	06:13	05:03	04:25	04:44	05:40	06:42	07:42	07:48	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:38	18:18	16:08	15:37
15	08:39	07:43	06:33	06:11	05:02	04:25	04:45	05:42	06:44	07:44	07:51	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:16	16:07	15:37
16	08:38	07:41	06:30	06:08	05:00	04:25	04:47	05:44	06:46	07:46	07:53	08:42
	16:11	17:18	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:05	15:37
17	08:36	07:38	06:27	06:05	04:58	04:25	04:48	05:46	06:48	07:48	07:55	08:43
	16:13	17:20	18:20	20:24	21:25	22:06	21:51	20:50	19:30	18:10	16:03	15:37
18	08:35	07:36	06:25	06:03	04:56	04:25	04:50	05:48	06:50	07:51	07:57	08:44
	16:15	17:22	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08	16:01	15:37
19	08:34	07:34	06:22	06:00	04:54	04:24	04:52	05:50	06:52	07:53	07:59	08:45
	16:17	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	16:00	15:37
20	08:32	07:31	06:19	05:58	04:52	04:25	04:53	05:52	06:54	07:55	08:01	08:45
	16:19	17:26	18:26	20:31	21:31	22:07	21:47	20:43	19:21	18:03	15:58	15:38
21	08:31	07:29	06:17	05:55	04:51	04:25	04:55	05:54	06:56	07:57	08:03	08:46
	16:21	17:29	18:28	20:33	21:32	22:07	21:45	20:40	19:19	18:01	15:57	15:38
22	08:30	07:26	06:14	05:53	04:49	04:25	04:57	05:56	06:58	07:59	08:05	08:47
	16:23	17:31	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:58	15:55	15:39
23	08:28	07:24	06:11	05:50	04:47	04:25	04:58	05:58	07:00	08:01	08:07	08:47
	16:25	17:33	18:33	20:37	21:36	22:08	21:42	20:35	19:13	17:56	15:54	15:39
24	08:26	07:21	06:09	05:48	04:46	04:25	05:00	06:00	07:02	08:03	08:09	08:47
	16:27	17:35	18:35	20:39	21:38	22:08	21:40	20:33	19:11	17:53	15:52	15:40
25	08:25	07:19	06:06	05:46	04:44	04:26	05:02	06:02	07:03	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:40
26	08:23	07:16	06:03	05:43	04:43	04:26	05:04	06:04	07:05	08:08	08:13	08:48
	16:31	17:40	18:39	20:43	21:41	22:08	21:37	20:28	19:05	17:49	15:50	15:41
27	08:22	07:14	06:01	05:41	04:41	04:27	05:05	06:06	07:07	08:10	08:15	08:48
	16:33	17:42	18:41	20:45	21:42	22:08	21:35	20:25	19:03	17:46	15:48	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:10	08:12	08:16	08:48
	16:35	17:44	18:43	20:47	21:44	22:07	21:33	20:22	19:00	17:44	15:47	15:43
29	08:18		06:55	05:36	04:39	04:28	05:09	06:10	07:12	08:14	08:18	08:48
	16:38		19:45	20:49	21:46	22:07	21:31	20:20	18:57	17:42	15:46	15:44
30	08:16		06:53	05:34	04:37	04:29	05:11	06:12	07:14	08:16	08:20	08:48
	16:40		19:47	20:51	21:47	22:07	21:29	20:17	18:55	17:39	15:45	15:45
31	08:14		06:50		04:36		05:13	06:14		07:18		08:48
	16:42		19:49		21:49		21:28	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Grovani - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (483)  
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:46	08:12 16:43	07:09 17:45	16:50 (Pr3a) 17:09 (Pr3a)	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:07	05:14 21:25	06:15 20:12	07:15 18:51	17:49 (PrRR3) 18:15 (PrRR3)	07:20 16:34	08:22 15:43
2	08:48 15:47	08:10 16:45	07:06 17:48	16:50 (Pr3a) 17:08 (Pr3a)	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	17:50 (PrRR3) 18:14 (PrRR3)	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	16:50 (Pr3a) 17:07 (Pr3a)	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	17:50 (PrRR3) 18:12 (PrRR3)	07:25 16:30	08:25 15:41
4	08:47 15:50	08:07 16:50	07:01 17:52	16:52 (Pr3a) 17:06 (Pr3a)	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	07:21 18:43	17:52 (PrRR3) 18:10 (PrRR3)	07:27 16:27	08:27 15:40
5	08:47 15:51	08:04 16:52	06:58 17:54	16:53 (Pr3a) 17:04 (Pr3a)	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	07:23 18:41	17:53 (PrRR3) 18:07 (PrRR3)	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	16:57 (Pr3a) 16:59 (Pr3a)	06:33 20:01	05:19 21:03	04:29 21:57	04:33 22:03	05:23 21:15	06:25 19:59	07:25 18:38	17:57 (PrRR3) 18:02 (PrRR3)	07:31 16:23	08:30 15:39
7	08:46 15:54	08:00 16:57	06:53 17:58	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	17:53 (PrRR3) 17:30 (Pr3a)	07:33 16:21	08:31 15:38
8	08:45 15:56	07:58 16:59	06:50 18:01	17:18 (PrRR3) 17:29 (PrRR3)	06:28 20:05	05:15 21:07	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	17:30 (Pr3a) 17:37 (Pr3a)	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	17:14 (PrRR3) 17:31 (PrRR3)	06:25 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51	07:31 18:30	17:27 (Pr3a) 17:39 (Pr3a)	07:38 16:17	08:34 15:37
10	08:44 15:59	07:54 17:03	06:45 18:05	17:13 (PrRR3) 17:33 (PrRR3)	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:31 21:06	06:33 19:48	07:33 18:28	17:25 (Pr3a) 17:41 (Pr3a)	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	17:11 (PrRR3) 17:34 (PrRR3)	06:20 20:12	05:09 21:13	04:25 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	17:24 (Pr3a) 17:42 (Pr3a)	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	17:09 (PrRR3) 17:35 (PrRR3)	06:18 20:14	05:07 21:15	04:25 22:03	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	17:23 (Pr3a) 17:42 (Pr3a)	07:44 16:11	08:38 15:36
13	08:41 16:04	07:47 17:10	06:37 18:11	17:09 (PrRR3) 17:36 (PrRR3)	06:15 20:16	05:05 21:17	04:25 22:03	04:41 21:57	05:37 20:59	06:39 19:40	07:40 18:20	17:42 (Pr3a) 17:22 (Pr3a)	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	17:08 (PrRR3) 17:36 (PrRR3)	06:12 20:18	05:03 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:17	17:22 (Pr3a) 17:42 (Pr3a)	07:48 16:07	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	17:07 (PrRR3) 17:47 (Pr25)	06:10 20:20	05:01 21:21	04:24 22:05	04:44 21:54	05:41 20:54	06:43 19:34	07:44 18:15	17:22 (Pr3a) 17:41 (Pr3a)	07:50 16:06	08:41 15:36
16	08:38 16:10	07:40 17:17	06:29 18:17	17:07 (PrRR3) 17:50 (Pr25)	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	17:23 (Pr3a) 17:41 (Pr3a)	07:53 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	17:07 (PrRR3) 17:52 (Pr25)	06:05 20:24	04:57 21:25	04:23 22:06	04:47 21:51	05:45 20:50	06:47 19:29	07:48 18:09	17:23 (Pr3a) 17:38 (Pr3a)	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	17:06 (PrRR3) 17:53 (Pr25)	06:02 20:26	04:55 21:27	04:23 22:06	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	17:23 (Pr3a) 17:35 (Pr25)	07:57 16:00	08:44 15:36
19	08:34 16:16	07:33 17:23	06:21 18:24	17:07 (PrRR3) 17:56 (Pr25)	06:00 20:28	04:53 21:29	04:23 22:07	04:51 21:49	05:49 21:45	06:51 19:24	07:52 18:00	17:24 (Pr3a) 17:32 (Pr3a)	07:59 15:59	08:45 15:36
20	08:32 16:18	07:31 17:26	06:19 18:26	17:07 (PrRR3) 17:57 (Pr25)	05:57 20:30	04:51 21:31	04:23 22:07	04:52 21:47	05:51 20:42	06:53 19:21	07:54 18:02	17:27 (Pr3a) 17:30 (Pr3a)	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	17:07 (PrRR3) 17:56 (Pr25)	05:55 20:32	04:50 21:32	04:23 22:07	04:54 21:45	05:53 20:40	06:55 19:18	07:57 18:00	17:54 (PrRR3) 18:41 (Pr25)	08:03 17:52	08:46 15:56
22	08:30 16:22	07:26 17:30	06:13 18:30	17:08 (PrRR3) 17:55 (Pr25)	05:52 20:34	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 19:16	07:59 18:01	17:52 (PrRR3) 18:41 (Pr25)	08:05 17:57	08:47 15:54
23	08:28 16:24	07:24 17:32	06:11 18:32	17:10 (PrRR3) 17:55 (Pr25)	05:50 20:36	04:46 21:36	04:24 22:08	04:57 21:42	05:57 20:35	06:59 19:13	07:59 18:01	17:51 (PrRR3) 18:41 (Pr25)	08:01 17:55	08:47 15:53
24	08:26 16:26	07:21 17:35	06:08 18:34	17:11 (PrRR3) 17:54 (Pr25)	05:47 20:39	04:45 21:38	04:24 22:08	04:59 21:40	05:59 20:32	07:01 19:10	08:03 17:53	17:50 (PrRR3) 18:40 (Pr25)	08:03 17:53	08:09 15:51
25	08:25 16:28	07:19 17:37	06:05 18:36	17:13 (PrRR3) 17:07 (Pr3a)	05:45 18:36	04:43 20:41	04:25 21:39	05:01 21:39	06:01 20:30	07:03 19:08	08:05 18:07	17:49 (PrRR3) 18:37 (Pr25)	08:05 16:50	08:48 15:50
26	08:23 16:30	07:17 17:39	06:03 18:38	17:10 (PrRR3) 17:50 (Pr25)	05:42 20:43	04:42 21:41	04:25 22:08	04:33 21:37	05:03 20:27	07:07 19:05	08:07 18:04	17:49 (PrRR3) 18:34 (Pr25)	08:07 16:48	08:48 15:49
27	08:21 16:32	07:14 17:41	06:00 18:40	16:49 (Pr3a) 17:09 (Pr3a)	05:40 18:40	04:40 21:43	04:25 22:08	05:04 21:35	06:05 20:25	07:07 19:02	08:09 18:31	17:48 (PrRR3) 18:31 (Pr25)	07:09 16:45	08:48 15:47
28	08:20 16:34	07:11 17:43	05:57 18:42	16:49 (Pr3a) 17:09 (Pr3a)	05:40 18:42	04:39 21:44	04:26 22:08	05:06 21:33	06:07 20:22	07:09 18:59	08:11 18:33	17:48 (PrRR3) 18:29 (Pr25)	07:12 16:43	08:48 15:46
29	08:18 16:37		06:55 19:45		05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 18:57	08:13 18:16	17:48 (PrRR3) 18:16 (PrRR3)	07:14 16:41	08:48 15:45
30	08:16 16:39		06:52 19:47		05:33 20:51	04:36 21:47	04:27 22:07	05:10 21:29	06:11 20:17	07:13 18:54	08:15 18:15	17:48 (PrRR3) 18:15 (PrRR3)	07:16 16:38	08:49 15:44
31	08:14 16:41		06:49 19:49		05:35 21:49	04:35 21:49	05:12 21:27	06:13 20:14					07:18 16:36	08:48 15:45
Potential sun hours	236	266	366		426	507	528	529	469	384	324		248	217
Total, worst case		105	671							487	296			
Sun reduction		0,23	0,39							0,43	0,29			
Oper. time red.		1,00	1,00							1,00	1,00			
Wind dir. red.		1,00	1,00							1,00	1,00			
Total reduction		0,23	0,39							0,43	0,29			
Total, real		24	263							210	86			

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

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Ievaiš i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (452)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January			February			March			April	May	June
1	08:48		10:05 (AP2)	08:13		15:26 (Pr11)	07:09		07:44 (Pr25)	06:47	05:31	04:34
	15:46	63	12:04 (JU1)	16:43	38	16:04 (Pr12)	17:46	36	15:45 (Pr11)	19:51	20:53	21:50
2	08:48		10:06 (AP2)	08:11		15:24 (Pr11)	07:06		07:41 (Pr25)	06:44	05:28	04:33
	15:48	60	12:04 (JU1)	16:46	41	16:05 (Pr12)	17:48	28	15:39 (Pr11)	19:53	20:55	21:52
3	08:48		10:07 (AP2)	08:09		08:42 (Pr3a)	07:04		07:41 (Pr25)	06:41	05:26	04:32
	15:49	58	12:04 (JU1)	16:48	46	16:06 (Pr12)	17:50	25	08:06 (Pr25)	19:55	20:57	21:53
4	08:48		10:08 (AP2)	08:07		08:39 (Pr3a)	07:01		07:27 (PrRR3)	06:39	05:24	04:31
	15:50	55	12:04 (JU1)	16:50	56	16:07 (Pr12)	17:52	36	08:06 (Pr25)	19:57	20:59	21:54
5	08:47		10:08 (AP2)	08:05		08:36 (Pr3a)	06:58		07:24 (PrRR3)	06:36	05:22	04:30
	15:52	52	12:03 (JU1)	16:52	62	16:07 (Pr12)	17:54	42	08:07 (Pr25)	19:59	21:01	21:56
6	08:47		10:10 (AP2)	08:03		08:35 (Pr3a)	06:56		07:22 (PrRR3)	06:34	05:19	04:29
	15:53	48	12:04 (JU1)	16:55	67	16:08 (Pr12)	17:56	46	08:08 (Pr25)	20:01	21:04	21:57
7	08:46		10:12 (AP2)	08:01		08:34 (Pr3a)	06:53		07:20 (PrRR3)	06:31	05:17	04:28
	15:55	43	12:04 (JU1)	16:57	69	16:08 (Pr12)	17:59	47	08:07 (Pr25)	20:03	21:06	21:58
8	08:45		10:13 (AP2)	07:58		08:34 (Pr3a)	06:51		07:19 (PrRR3)	06:28	05:15	04:28
	15:56	37	12:03 (JU1)	16:59	71	16:09 (Pr12)	18:01	48	08:07 (Pr25)	20:06	21:08	21:59
9	08:45		10:36 (AP6.1)	07:56		08:33 (Pr3a)	06:48		07:19 (PrRR3)	06:26	05:13	04:27
	15:58	25	12:02 (JU1)	17:01	73	16:08 (Pr12)	18:03	48	08:07 (Pr25)	20:08	21:10	22:00
10	08:44		10:38 (AP6.1)	07:54		08:33 (Pr3a)	06:45		07:19 (PrRR3)	06:23	05:11	04:26
	15:59	18	12:01 (JU1)	17:04	75	16:09 (Pr12)	18:05	48	08:07 (Pr25)	20:10	21:12	22:01
11	08:43		11:52 (JU1)	07:52		08:32 (Pr3a)	06:43		07:18 (PrRR3)	06:20	05:09	04:26
	16:01	6	11:58 (JU1)	17:06	76	16:08 (Pr12)	18:07	58	17:32 (O6)	20:12	21:14	22:02
12	08:42			07:50		08:32 (Pr3a)	06:40		07:19 (PrRR3)	06:18	05:07	04:25
	16:03			17:08	77	16:08 (Pr12)	18:09	64	17:36 (O6)	20:14	21:16	22:03
13	08:41			07:47		08:33 (Pr3a)	06:38		07:19 (PrRR3)	06:15	05:05	04:25
	16:05			17:10	75	16:07 (Pr12)	18:11	66	17:37 (O6)	20:16	21:18	22:04
14	08:40			07:45		08:32 (Pr3a)	06:35		07:20 (PrRR3)	06:13	05:03	04:24
	16:06			17:12	75	16:06 (Pr12)	18:13	65	17:38 (O6)	20:18	21:19	22:04
15	08:39			07:43		08:33 (Pr3a)	06:32		07:22 (PrRR3)	06:10	05:01	04:24
	16:08			17:15	72	16:05 (Pr12)	18:16	61	17:40 (O6)	20:20	21:21	22:05
16	08:38			07:41		08:33 (Pr3a)	06:30		07:26 (PrRR3)	06:07	04:59	04:24
	16:10			17:17	70	16:03 (Pr12)	18:18	51	17:40 (O6)	20:22	21:23	22:06
17	08:37			07:38		08:34 (Pr3a)	06:27		07:42 (Pr25)	06:05	04:57	04:24
	16:12			17:19	67	16:02 (Pr12)	18:20	44	17:40 (O6)	20:24	21:25	22:06
18	08:35			07:36		08:35 (Pr3a)	06:24		07:45 (Pr25)	06:02	04:55	04:24
	16:14			17:21	62	15:59 (Pr11)	18:22	37	17:40 (O6)	20:26	21:27	22:07
19	08:34			07:33		08:37 (Pr3a)	06:22		17:10 (O6)	06:00	04:53	04:23
	16:16			17:24	58	15:59 (Pr11)	18:24	30	17:40 (O6)	20:28	21:29	22:07
20	08:33			07:31		08:38 (Pr3a)	06:19		17:10 (O6)	05:57	04:52	04:24
	16:18			17:26	53	15:58 (Pr11)	18:26	30	17:40 (O6)	20:30	21:31	22:07
21	08:31			07:29		15:17 (Pr11)	06:16		17:09 (O6)	05:55	04:50	04:24
	16:20			17:28	41	15:58 (Pr11)	18:28	30	17:39 (O6)	20:33	21:33	22:08
22	08:30			07:26		15:17 (Pr11)	06:14		17:10 (O6)	05:52	04:48	04:24
	16:22			17:30	40	15:57 (Pr11)	18:30	29	17:39 (O6)	20:35	21:34	22:08
23	08:28			07:24		15:19 (Pr11)	06:11		17:10 (O6)	05:50	04:47	04:24
	16:24			17:32	37	15:56 (Pr11)	18:32	28	17:38 (O6)	20:37	21:36	22:08
24	08:27			07:21		15:19 (Pr11)	06:08		17:10 (O6)	05:47	04:45	04:24
	16:26			17:35	36	15:55 (Pr11)	18:34	27	17:37 (O6)	20:39	21:38	22:08
25	08:25			07:19		15:20 (Pr11)	06:06		17:11 (O6)	05:45	04:43	04:25
	16:28			17:37	33	15:53 (Pr11)	18:36	26	17:37 (O6)	20:41	21:39	22:08
26	08:23			07:16		15:22 (Pr11)	06:03		17:11 (O6)	05:43	04:42	04:25
	16:30			17:39	31	15:53 (Pr11)	18:39	24	17:35 (O6)	20:43	21:41	22:08
27	08:22			07:14		07:49 (Pr25)	06:00		17:12 (O6)	05:40	04:41	04:26
	16:33			17:41	36	15:50 (Pr11)	18:41	21	17:33 (O6)	20:45	21:43	22:08
28	08:20			07:11		07:46 (Pr25)	05:58		17:15 (O6)	05:38	04:39	04:26
	16:35			17:43	39	15:49 (Pr11)	18:43	16	17:31 (O6)	20:47	21:44	22:08
29	08:18		15:49 (Pr12)				06:55		18:17 (O6)	05:35	04:38	04:27
	16:37	9	15:58 (Pr12)				19:45	11	18:28 (O6)	20:49	21:46	22:07
30	08:16		15:33 (Pr11)				06:52			05:33	04:37	04:28
	16:39	18	16:00 (Pr12)				19:47			20:51	21:47	22:07
31	08:14		15:28 (Pr11)				06:49				04:35	
	16:41	32	16:02 (Pr12)				19:49				21:49	
Potential sun hours	236			266			366		426	507	528	
Total, worst case		524			1576		1122					
Sun reduction		0,13			0,23		0,39					
Oper. time red.		1,00			1,00		1,00					
Wind dir. red.		1,00			1,00		1,00					
Total reduction		0,13			0,23		0,39					
Total, real		70			355		439					

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)

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Ievaiši - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (452)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:28	05:14	06:15	07:15	07:59 (PrRR3)	08:02 (Pr3a)
2	22:07	21:26	20:12	18:52	18:16 (O6)	16:34
3	04:29	05:16	06:17	07:17	07:58 (PrRR3)	08:02 (Pr3a)
4	22:06	21:24	20:09	18:49	18:13 (O6)	16:32
5	04:30	05:18	06:19	07:19	07:57 (PrRR3)	08:04 (Pr3a)
6	22:06	21:22	20:07	18:46	18:07 (O6)	16:30
7	04:31	05:20	06:21	07:21	07:56 (PrRR3)	08:04 (Pr3a)
8	22:05	21:19	20:04	18:44	08:44 (Pr25)	16:28
9	04:32	05:22	06:23	07:23	07:56 (PrRR3)	08:05 (Pr3a)
10	22:04	21:17	20:01	18:41	08:44 (Pr25)	16:25
11	04:33	05:24	06:25	07:25	07:56 (PrRR3)	08:07 (Pr3a)
12	22:04	21:15	19:59	18:38	08:44 (Pr25)	16:23
13	04:34	05:25	06:27	07:28	07:56 (PrRR3)	08:09 (Pr3a)
14	22:03	21:13	19:56	18:36	08:43 (Pr25)	16:21
15	04:35	05:27	06:29	07:30	07:58 (PrRR3)	08:03
16	22:02	21:11	19:53	18:33	08:42 (Pr25)	16:19
17	04:36	05:29	06:31	07:32	08:01 (PrRR3)	08:03
18	22:01	21:09	19:51	18:31	08:42 (Pr25)	16:17
19	04:38	05:31	06:33	07:34	08:03 (PrRR3)	08:03
20	22:00	21:06	19:48	18:28	08:41 (Pr25)	16:15
21	04:39	05:33	06:35	07:36	08:15 (Pr25)	16:13
22	21:59	21:04	19:45	18:25	08:40 (Pr25)	16:13
23	04:40	05:35	06:37	07:38	08:16 (Pr25)	16:11
24	21:58	21:02	19:43	18:23	16:16 (Pr11)	15:32
25	04:42	05:37	06:39	07:40	08:17 (Pr25)	16:11
26	21:57	20:59	19:40	18:20	16:20 (Pr11)	15:29
27	04:43	05:39	06:41	07:42	08:19 (Pr25)	16:09
28	21:56	20:57	19:37	18:17 (O6)	16:22 (Pr11)	16:08
29	04:45	05:41	06:43	07:44	08:26 (Pr25)	16:08
30	21:54	20:55	19:35	18:15	16:24 (Pr11)	16:06
31	04:46	05:43	06:45	07:46	15:53 (Pr11)	16:06
32	21:53	20:52	19:32	18:13	16:25 (Pr11)	16:04
33	04:48	05:45	06:47	07:48	15:51 (Pr11)	16:04
34	21:52	20:50	19:29	18:10	16:26 (Pr11)	16:02
35	04:49	05:47	06:49	07:50	15:50 (Pr11)	16:02
36	21:50	20:47	19:27	18:07	16:27 (Pr11)	16:01
37	04:51	05:49	06:51	07:52	15:48 (Pr11)	16:01
38	21:49	20:45	19:24	18:05	16:27 (Pr11)	15:59
39	04:52	05:51	06:53	07:55	15:48 (Pr11)	15:59
40	21:47	20:43	19:21	18:02	16:28 (Pr11)	15:57
41	04:54	05:53	06:55	07:57	09:12 (Pr3a)	15:57
42	21:46	20:40	19:18	18:00	16:28 (Pr11)	15:56
43	04:56	05:55	06:57	07:59	09:08 (Pr3a)	15:56
44	21:44	20:38	19:16	17:58	16:28 (Pr11)	15:54
45	04:57	05:57	06:59	08:01	09:07 (Pr3a)	15:54
46	21:42	20:35	19:13	17:55	16:29 (Pr11)	15:53
47	04:59	05:59	07:01	08:03	09:05 (Pr3a)	15:53
48	21:41	20:33	19:10	17:53	16:29 (Pr12)	15:52
49	05:01	06:01	07:03	08:05	08:03 (Pr3a)	15:52
50	21:39	20:30	19:08	16:50	15:32 (Pr12)	15:50
51	05:03	06:03	07:05	08:07	08:03 (Pr3a)	15:50
52	21:37	20:27	19:05	16:48	15:34 (Pr12)	15:49
53	05:05	06:05	07:07	08:09	08:02 (Pr3a)	15:49
54	21:35	20:25	19:02	16:46	15:35 (Pr12)	15:48
55	05:06	06:07	07:09	08:11	08:02 (Pr3a)	15:48
56	21:33	20:22	19:00	16:43	15:36 (Pr12)	15:47
57	05:08	06:09	07:11	08:13	08:02 (Pr3a)	15:46
58	21:32	20:20	18:57	16:41	15:37 (Pr12)	15:45
59	05:10	06:11	07:13	08:15	08:02 (Pr3a)	15:45
60	21:30	20:17	18:54	16:39	15:37 (Pr12)	15:44
61	05:12	06:13		07:18	08:01 (Pr3a)	15:44
62	21:28	20:15		16:36	15:37 (Pr12)	15:43
Potential sun hours	529	469	384	324	248	217
Total, worst case			571	1569	646	1825
Sun reduction			0,43	0,29	0,08	0,08
Oper. time red.			1,00	1,00	1,00	1,00
Wind dir. red.			1,00	1,00	1,00	1,00
Total reduction			0,43	0,29	0,08	0,08
Total, real			246	455	49	154

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

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

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Irbeni - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (497)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January	February	March	April		May		June			
1	08:48	08:12	07:09	06:47		19:19 (Pr3a)	05:31	19:54 (Pr25)	04:34		20:09 (PrRR3)
	15:46	16:43	17:45	19:51	4	19:23 (Pr3a)	20:53	20:14 (Pr25)	21:50	26	20:35 (PrRR3)
2	08:48	08:10	07:06	06:44		19:14 (Pr3a)	05:28	19:55 (Pr25)	04:33		20:10 (PrRR3)
	15:48	16:45	17:48	19:53	10	19:24 (Pr3a)	20:55	20:14 (Pr25)	21:51	24	20:34 (PrRR3)
3	08:48	08:08	07:03	06:41		19:12 (Pr3a)	05:26	19:55 (Pr25)	04:32		20:10 (PrRR3)
	15:49	16:48	17:50	19:55	14	19:26 (Pr3a)	20:57	20:14 (Pr25)	21:53	24	20:34 (PrRR3)
4	08:47	08:06	07:01	06:39		19:11 (Pr3a)	05:24	19:56 (Pr25)	04:31		20:12 (PrRR3)
	15:50	16:50	17:52	19:57	18	19:29 (Pr3a)	20:59	20:13 (Pr25)	21:54	23	20:35 (PrRR3)
5	08:47	08:04	06:58	06:36		19:09 (Pr3a)	05:21	19:56 (Pr25)	04:30		20:12 (PrRR3)
	15:52	16:52	17:54	19:59	21	19:30 (Pr3a)	21:01	20:12 (Pr25)	21:55	22	20:34 (PrRR3)
6	08:46	08:02	06:56	06:33		19:09 (Pr3a)	05:19	19:58 (Pr25)	04:29		20:13 (PrRR3)
	15:53	16:54	17:56	20:01	21	19:30 (Pr3a)	21:03	20:25 (PrRR3)	21:57	20	20:33 (PrRR3)
7	08:46	08:00	06:53	06:31		19:08 (Pr3a)	05:17	19:59 (Pr25)	04:28		20:14 (PrRR3)
	15:54	16:57	17:58	20:03	22	19:30 (Pr3a)	21:05	20:28 (PrRR3)	21:58	20	20:34 (PrRR3)
8	08:45	07:58	06:50	06:28		19:07 (Pr3a)	05:15	20:02 (Pr25)	04:27		20:14 (PrRR3)
	15:56	16:59	18:01	20:05	23	19:30 (Pr3a)	21:07	20:30 (PrRR3)	21:59	19	20:33 (PrRR3)
9	08:44	07:56	06:48	06:25		19:07 (Pr3a)	05:13	20:11 (PrRR3)	04:27		20:14 (PrRR3)
	15:58	17:01	18:03	20:07	23	19:30 (Pr3a)	21:09	20:31 (PrRR3)	22:00	18	20:32 (PrRR3)
10	08:44	07:54	06:45	06:23		19:07 (Pr3a)	05:11	20:10 (PrRR3)	04:26		20:16 (PrRR3)
	15:59	17:03	18:05	20:09	22	19:29 (Pr3a)	21:11	20:32 (PrRR3)	22:01	16	20:32 (PrRR3)
11	08:43	07:52	06:43	06:20		19:07 (Pr3a)	05:09	20:08 (PrRR3)	04:26		20:17 (PrRR3)
	16:01	17:06	18:07	20:12	22	19:29 (Pr3a)	21:13	20:33 (PrRR3)	22:02	16	20:33 (PrRR3)
12	08:42	07:49	06:40	06:18		19:07 (Pr3a)	05:07	20:08 (PrRR3)	04:25		20:17 (PrRR3)
	16:03	17:08	18:09	20:14	20	19:27 (Pr3a)	21:15	20:34 (PrRR3)	22:03	15	20:32 (PrRR3)
13	08:41	07:47	06:37	06:15		19:09 (Pr3a)	05:05	20:07 (PrRR3)	04:25		20:18 (PrRR3)
	16:04	17:10	18:11	20:16	17	19:26 (Pr3a)	21:17	20:34 (PrRR3)	22:03	14	20:32 (PrRR3)
14	08:40	07:45	06:35	06:12		19:09 (Pr3a)	05:03	20:07 (PrRR3)	04:24		20:19 (PrRR3)
	16:06	17:12	18:13	20:18	15	19:24 (Pr3a)	21:19	20:35 (PrRR3)	22:04	13	20:32 (PrRR3)
15	08:39	07:43	06:32	06:10		19:12 (Pr3a)	05:01	20:06 (PrRR3)	04:24		20:20 (PrRR3)
	16:08	17:15	18:15	20:20	10	19:22 (Pr3a)	21:21	20:35 (PrRR3)	22:05	12	20:32 (PrRR3)
16	08:38	07:40	06:29	06:07			04:59	20:06 (PrRR3)	04:24		20:19 (PrRR3)
	16:10	17:17	18:17	20:22			21:23	20:35 (PrRR3)	22:05	11	20:30 (PrRR3)
17	08:36	07:38	06:27	06:05			04:57	20:06 (PrRR3)	04:24		20:20 (PrRR3)
	16:12	17:19	18:20	20:24			21:25	20:36 (PrRR3)	22:06	10	20:30 (PrRR3)
18	08:35	07:36	06:24	06:02			04:55	20:06 (PrRR3)	04:23		20:20 (PrRR3)
	16:14	17:21	18:22	20:26			21:27	20:36 (PrRR3)	22:06	10	20:30 (PrRR3)
19	08:34	07:33	06:21	06:00			04:53	20:05 (PrRR3)	04:23		20:21 (PrRR3)
	16:16	17:23	18:24	20:28			21:29	20:36 (PrRR3)	22:07	9	20:30 (PrRR3)
20	08:32	07:31	06:19	05:57			04:51	20:06 (PrRR3)	04:23		20:22 (PrRR3)
	16:18	17:26	18:26	20:30			21:30	20:36 (PrRR3)	22:07	9	20:31 (PrRR3)
21	08:31	07:28	06:16	05:55			04:50	20:05 (PrRR3)	04:24		20:22 (PrRR3)
	16:20	17:28	18:28	20:32			21:32	20:36 (PrRR3)	22:07	9	20:31 (PrRR3)
22	08:29	07:26	06:13	05:52			04:48	20:06 (PrRR3)	04:24		20:22 (PrRR3)
	16:22	17:30	18:30	20:34			21:34	20:36 (PrRR3)	22:08	9	20:31 (PrRR3)
23	08:28	07:24	06:11	05:50		20:01 (Pr25)	04:46	20:06 (PrRR3)	04:24		20:22 (PrRR3)
	16:24	17:32	18:32	20:36	4	20:05 (Pr25)	21:36	20:37 (PrRR3)	22:08	9	20:31 (PrRR3)
24	08:26	07:21	06:08	05:47		19:59 (Pr25)	04:45	20:06 (PrRR3)	04:24		20:23 (PrRR3)
	16:26	17:35	18:34	20:39	9	20:08 (Pr25)	21:38	20:36 (PrRR3)	22:08	9	20:32 (PrRR3)
25	08:25	07:19	06:05	05:45		19:58 (Pr25)	04:43	20:07 (PrRR3)	04:25		20:22 (PrRR3)
	16:28	17:37	18:36	20:41	12	20:10 (Pr25)	21:39	20:36 (PrRR3)	22:08	10	20:32 (PrRR3)
26	08:23	07:16	06:03	05:42		19:56 (Pr25)	04:42	20:07 (PrRR3)	04:25		20:22 (PrRR3)
	16:30	17:39	18:38	20:43	15	20:11 (Pr25)	21:41	20:36 (PrRR3)	22:08	10	20:32 (PrRR3)
27	08:21	07:14	06:00	05:40		19:56 (Pr25)	04:40	20:07 (PrRR3)	04:26		20:22 (PrRR3)
	16:32	17:41	18:40	20:45	17	20:13 (Pr25)	21:42	20:36 (PrRR3)	22:08	12	20:34 (PrRR3)
28	08:20	07:11	05:57	05:38		19:55 (Pr25)	04:39	20:07 (PrRR3)	04:26		20:22 (PrRR3)
	16:35	17:43	18:42	20:47	20	20:15 (Pr25)	21:44	20:36 (PrRR3)	22:07	13	20:35 (PrRR3)
29	08:18		06:55	05:35		19:55 (Pr25)	04:38	20:08 (PrRR3)	04:27		20:21 (PrRR3)
	16:37		19:45	20:49	20	20:15 (Pr25)	21:46	20:35 (PrRR3)	22:07	14	20:35 (PrRR3)
30	08:16		06:52	05:33		19:54 (Pr25)	04:36	20:08 (PrRR3)	04:27		20:21 (PrRR3)
	16:39		19:47	20:51	20	20:14 (Pr25)	21:47	20:35 (PrRR3)	22:07	15	20:36 (PrRR3)
31	08:14		06:49				04:35	20:09 (PrRR3)			
	16:41		19:49				21:49	20:35 (PrRR3)			
Potential sun hours	236	266	366	426			507		528		
Total, worst case					379		803			441	
Sun reduction					0,44		0,56			0,57	
Oper. time red.					1,00		1,00			1,00	
Wind dir. red.					1,00		1,00			1,00	
Total reduction					0,44		0,56			0,57	
Total, real					167		452			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)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Irbeni - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (497)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:28 22:06 16	20:21 (PrRR3) 20:37 (PrRR3) 21:25	05:14 20:44 (PrRR3) 20:12	19:06 (Pr3a) 19:28 (Pr3a) 18:51	07:15 18:51 16:34	08:22 15:43 15:43
2	04:29 22:06 16	20:20 (PrRR3) 20:36 (PrRR3) 21:23	05:16 20:43 (PrRR3) 20:09	19:06 (Pr3a) 19:28 (Pr3a) 18:49	07:17 18:49 16:32	08:23 15:42 15:42
3	04:30 22:05 17	20:20 (PrRR3) 20:37 (PrRR3) 21:21	05:18 20:42 (PrRR3) 20:06	19:05 (Pr3a) 19:28 (Pr3a) 18:46	07:19 18:46 16:30	08:25 15:41 15:41
4	04:31 22:05 18	20:20 (PrRR3) 20:38 (PrRR3) 21:19	05:20 20:22 (PrRR3) 20:04	19:05 (Pr3a) 19:28 (Pr3a) 18:44	07:21 18:44 16:27	08:27 15:41 15:41
5	04:32 22:04 20	20:19 (PrRR3) 20:39 (PrRR3) 21:17	05:21 20:39 (PrRR3) 20:01	19:04 (Pr3a) 19:26 (Pr3a) 18:41	07:23 18:41 16:25	08:28 15:40 15:40
6	04:33 22:03 21	20:19 (PrRR3) 20:40 (PrRR3) 21:15	05:23 20:08 (Pr25) 06:25	19:04 (Pr3a) 19:26 (Pr3a) 18:38	07:25 18:38 16:23	08:30 15:39 15:39
7	04:34 22:03 21	20:19 (PrRR3) 20:40 (PrRR3) 21:13	05:25 20:07 (Pr25) 06:27	19:04 (Pr3a) 19:25 (Pr3a) 18:36	07:27 18:36 16:21	08:31 15:38 15:38
8	04:35 22:02 23	20:18 (PrRR3) 20:41 (PrRR3) 21:11	05:27 20:06 (Pr25) 06:29	19:05 (Pr3a) 19:23 (Pr3a) 18:33	07:29 18:33 16:19	08:33 15:38 15:38
9	04:36 22:01 23	20:18 (PrRR3) 20:41 (PrRR3) 21:08	05:29 20:05 (Pr25) 06:31	19:06 (Pr3a) 19:20 (Pr3a) 18:30	07:31 18:30 16:17	08:34 15:37 15:37
10	04:38 22:00 24	20:18 (PrRR3) 20:42 (PrRR3) 21:06	05:31 20:04 (Pr25) 06:33	19:07 (Pr3a) 19:18 (Pr3a) 18:28	07:33 18:28 16:15	08:35 15:37 15:37
11	04:39 21:59 25	20:17 (PrRR3) 20:42 (PrRR3) 21:04	05:33 20:03 (Pr25) 06:35	19:10 (Pr3a) 19:15 (Pr3a) 18:25	07:36 18:25 16:13	08:37 15:37 15:37
12	04:40 21:58 25	20:18 (PrRR3) 20:43 (PrRR3) 21:01	05:35 20:03 (Pr25) 06:37	19:11 (Pr3a) 19:16 (Pr3a) 18:26	07:38 18:26 16:11	08:38 15:36 15:36
13	04:42 21:57 27	20:17 (PrRR3) 20:44 (PrRR3) 20:59	05:37 20:03 (Pr25) 06:39	19:12 (Pr3a) 19:17 (Pr3a) 18:27	07:40 18:27 16:10	08:39 15:36 15:36
14	04:43 21:55 27	20:17 (PrRR3) 20:44 (PrRR3) 20:57	05:39 20:03 (Pr25) 06:41	19:13 (Pr3a) 19:18 (Pr3a) 18:28	07:42 18:28 16:09	08:40 15:36 15:36
15	04:44 21:54 28	20:17 (PrRR3) 20:45 (PrRR3) 20:54	05:41 20:03 (Pr25) 06:43	19:14 (Pr3a) 19:19 (Pr3a) 18:29	07:44 18:29 16:08	08:41 15:36 15:36
16	04:46 21:53 28	20:17 (PrRR3) 20:45 (PrRR3) 20:52	05:43 20:03 (Pr25) 06:45	19:15 (Pr3a) 19:20 (Pr3a) 18:30	07:46 18:30 16:07	08:42 15:36 15:36
17	04:47 21:51 29	20:16 (PrRR3) 20:45 (PrRR3) 20:50	05:45 20:04 (Pr25) 06:47	19:16 (Pr3a) 19:21 (Pr3a) 18:31	07:48 18:31 16:06	08:43 15:36 15:36
18	04:49 21:50 30	20:16 (PrRR3) 20:46 (PrRR3) 20:47	05:47 20:04 (Pr25) 06:49	19:17 (Pr3a) 19:22 (Pr3a) 18:32	07:50 18:32 16:05	08:44 15:36 15:36
19	04:51 21:49 30	20:16 (PrRR3) 20:46 (PrRR3) 20:45	05:49 20:05 (Pr25) 06:51	19:18 (Pr3a) 19:23 (Pr3a) 18:33	07:52 18:33 16:04	08:45 15:36 15:36
20	04:52 21:47 30	20:16 (PrRR3) 20:46 (PrRR3) 20:42	05:51 20:07 (Pr25) 06:53	19:19 (Pr3a) 19:24 (Pr3a) 18:34	07:54 18:34 16:03	08:46 15:36 15:36
21	04:54 21:45 30	20:16 (PrRR3) 20:46 (PrRR3) 20:40	05:53 20:07 (Pr25) 06:55	19:20 (Pr3a) 19:25 (Pr3a) 18:35	07:56 18:35 16:02	08:47 15:36 15:36
22	04:56 21:44 31	20:16 (PrRR3) 20:47 (PrRR3) 20:37	05:55 20:08 (Pr25) 06:57	19:21 (Pr3a) 19:26 (Pr3a) 18:36	07:58 18:36 16:01	08:48 15:36 15:36
23	04:57 21:42 30	20:16 (PrRR3) 20:46 (PrRR3) 20:35	05:57 20:09 (Pr25) 06:59	19:22 (Pr3a) 19:27 (Pr3a) 18:37	08:00 18:37 16:00	08:49 15:36 15:36
24	04:59 21:40 31	20:16 (PrRR3) 20:47 (PrRR3) 20:32	05:59 20:10 (Pr25) 07:01	19:23 (Pr3a) 19:28 (Pr3a) 18:38	08:02 18:38 16:00	08:50 15:36 15:36
25	05:01 21:39 31	20:16 (PrRR3) 20:47 (PrRR3) 20:30	06:01 20:11 (Pr25) 07:03	19:24 (Pr3a) 19:29 (Pr3a) 18:39	08:04 18:39 16:00	08:51 15:36 15:36
26	05:03 21:37 30	20:16 (PrRR3) 20:46 (PrRR3) 20:27	06:03 20:12 (Pr3a) 07:05	19:25 (Pr3a) 19:30 (Pr3a) 18:40	08:06 18:40 16:00	08:52 15:36 15:36
27	05:04 21:35 29	20:17 (PrRR3) 20:46 (PrRR3) 20:25	06:05 20:13 (Pr25) 07:07	19:26 (Pr3a) 19:31 (Pr3a) 18:41	08:08 18:41 16:00	08:53 15:36 15:36
28	05:06 21:33 30	20:17 (PrRR3) 20:47 (PrRR3) 20:22	06:07 20:14 (Pr25) 07:09	19:27 (Pr3a) 19:32 (Pr3a) 18:42	08:10 18:42 16:00	08:54 15:36 15:36
29	05:08 21:31 29	20:17 (PrRR3) 20:46 (PrRR3) 20:20	06:09 20:15 (Pr25) 07:11	19:28 (Pr3a) 19:33 (Pr3a) 18:43	08:12 18:43 16:00	08:55 15:36 15:36
30	05:10 21:29 28	20:17 (PrRR3) 20:45 (PrRR3) 20:17	06:11 20:16 (Pr25) 07:13	19:29 (Pr3a) 19:34 (Pr3a) 18:44	08:14 18:44 16:00	08:56 15:36 15:36
31	05:12 21:27 27	20:18 (PrRR3) 20:45 (PrRR3) 20:14	06:13 20:17 (Pr25) 07:15	19:30 (Pr3a) 19:35 (Pr3a) 18:45	08:16 18:45 16:00	08:57 15:36 15:36
Potential sun hours	529	469	384	324	248	217
Total, worst case	804	426	203			
Sun reduction	0,47	0,52	0,43			
Oper. time red.	1,00	1,00	1,00			
Wind dir. red.	1,00	1,00	1,00			
Total reduction	0,47	0,52	0,43			
Total, real	379	222	88			

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Irš i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (548)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Ivašiš - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (486)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:46	08:12 16:43	07:08 17:45	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	20	20:27 (PrRR3) 20:47 (PrRR3)	06:15 18:51	07:15 16:34	07:20 15:43
2	08:48 15:48	08:10 16:45	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	20	20:27 (PrRR3) 20:47 (PrRR3)	06:17 18:49	07:17 16:32	07:22 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	19	20:28 (PrRR3) 20:47 (PrRR3)	06:19 18:46	07:19 16:30	07:25 15:41
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	20:22 (PrRR3) 20:21 (PrRR3)	04:31 04:30	04:31 04:32	19	20:28 (PrRR3) 20:46 (PrRR3)	06:21 18:43	07:21 16:27	07:27 15:40
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:21 21:01	20:21 (PrRR3) 20:29 (PrRR3)	04:30 21:55	04:32 22:04	18	20:28 (PrRR3) 20:43 (PrRR3)	06:23 18:41	07:23 16:25	07:29 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	20:20 (PrRR3) 20:31 (PrRR3)	04:29 21:56	04:33 22:03	15	20:28 (PrRR3) 20:41 (PrRR3)	06:25 18:38	07:25 16:23	07:31 15:39
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	20:19 (PrRR3) 20:32 (PrRR3)	04:28 21:58	04:34 22:03	13	20:29 (PrRR3) 20:39 (PrRR3)	06:27 18:36	07:27 16:21	07:33 15:38
8	08:45 15:56	07:58 16:59	06:50 18:00	06:28 20:05	05:15 21:07	20:18 (PrRR3) 20:34 (PrRR3)	04:27 21:59	04:35 22:02	10	20:31 (PrRR3) 20:37 (PrRR3)	06:29 18:33	07:29 16:19	07:35 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:25 20:07	05:13 21:09	20:18 (PrRR3) 20:36 (PrRR3)	04:27 22:00	04:36 22:01	6	20:33 (PrRR3) 20:35 (PrRR3)	06:31 18:30	07:31 16:17	07:38 15:37
10	08:43 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	20:17 (PrRR3) 20:37 (PrRR3)	04:26 22:01	04:38 22:00	2	05:31 21:06	06:33 18:28	07:33 16:15	07:40 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:11	05:09 21:13	20:17 (PrRR3) 20:37 (PrRR3)	04:26 22:02	04:39 21:59		05:33 21:04	06:35 18:25	07:36 16:13	07:42 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	20:17 (PrRR3) 20:37 (PrRR3)	04:25 22:02	04:40 21:58		05:35 21:01	06:37 18:23	07:38 16:11	07:44 15:36
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	20:17 (PrRR3) 20:36 (PrRR3)	04:25 22:03	04:42 21:57		05:37 20:59	06:39 18:20	07:40 16:09	07:46 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	05:03 21:19	20:18 (PrRR3) 20:37 (PrRR3)	04:24 22:04	04:43 21:55		05:39 20:57	06:41 18:17	07:42 16:07	07:48 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	20:18 (PrRR3) 20:36 (PrRR3)	04:24 22:05	04:44 21:54		05:41 20:54	06:43 18:15	07:44 16:06	07:50 15:36
16	08:37 16:10	07:40 17:17	06:29 18:17	06:07 20:22	04:59 21:23	20:18 (PrRR3) 20:36 (PrRR3)	04:24 22:05	04:46 21:53		05:43 20:52	06:45 18:12	07:46 16:04	07:52 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	20:19 (PrRR3) 20:36 (PrRR3)	04:23 22:06	04:47 21:51		05:45 20:50	06:47 18:10	07:48 16:02	07:55 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	20:19 (PrRR3) 20:35 (PrRR3)	04:23 22:06	04:49 21:50		05:47 20:47	06:49 18:07	07:50 16:00	07:57 15:36
19	08:34 16:16	07:33 17:23	06:21 18:24	06:00 20:28	04:53 21:29	20:20 (PrRR3) 20:33 (PrRR3)	04:23 22:07	04:51 21:48		05:49 20:45	06:51 18:05	07:52 15:59	07:59 15:36
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:51 21:30	20:22 (PrRR3) 20:33 (PrRR3)	04:23 22:07	04:52 21:47		05:51 20:42	06:53 18:02	07:54 15:57	08:01 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	20:23 (PrRR3) 20:31 (PrRR3)	04:24 22:07	04:54 21:45		05:53 20:40	06:55 18:00	07:56 15:56	08:03 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	20:24 (PrRR3) 20:37 (PrRR3)	04:56 22:08	05:55 21:44		05:55 20:37	06:57 17:57	07:59 15:54	08:05 15:38
23	08:28 16:24	07:23 17:32	06:11 18:32	05:50 20:36	04:46 21:36	20:24 (PrRR3) 20:36 (PrRR3)	04:57 22:08	05:57 21:42	5	20:32 (PrRR3) 20:42 (PrRR3)	06:59 17:55	08:01 15:53	08:07 15:38
24	08:26 16:26	07:21 17:34	06:08 18:34	05:47 20:39	04:45 21:37	20:24 (PrRR3) 20:39 (PrRR3)	04:59 22:08	05:59 21:40	10	20:32 (PrRR3) 20:44 (PrRR3)	07:01 17:53	08:03 15:51	08:09 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:43 21:39	20:25 (PrRR3) 20:45 (PrRR3)	05:01 22:08	06:01 21:39	12	20:31 (PrRR3) 20:45 (PrRR3)	07:03 16:50	08:11 15:50	08:48 15:39
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	04:42 21:41	20:25 (PrRR3) 20:45 (PrRR3)	05:03 22:08	06:03 21:37	14	20:29 (PrRR3) 20:45 (PrRR3)	07:05 16:48	08:13 15:49	08:48 15:40
27	08:21 16:32	07:14 17:41	06:00 18:40	05:40 20:45	04:40 21:42	20:26 (PrRR3) 20:46 (PrRR3)	05:04 22:08	06:05 21:35	16	20:29 (PrRR3) 20:46 (PrRR3)	07:07 16:45	08:14 15:48	08:48 15:41
28	08:20 16:34	07:11 17:43	05:57 18:42	05:38 20:47	04:39 21:44	20:27 (PrRR3) 20:47 (PrRR3)	05:06 22:07	06:07 21:33	17	20:29 (PrRR3) 20:47 (PrRR3)	07:09 16:43	08:16 15:46	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	20:28 (PrRR3) 20:47 (PrRR3)	05:08 22:07	06:09 21:31	18	20:28 (PrRR3) 20:47 (PrRR3)	07:11 16:41	08:18 15:45	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:36 21:47	20:27 (PrRR3) 20:47 (PrRR3)	05:10 21:29	06:11 20:17	19	20:28 (PrRR3) 20:47 (PrRR3)	07:13 16:38	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14	19	20:28 (PrRR3) 20:48 (PrRR3)	07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217	
Total, worst case					270			123					
Sun reduction					0,56			0,52					
Oper. time red.					1,00			1,00					
Wind dir. red.					1,00			1,00					
Total reduction					0,56			0,52					
Total, real					152			64					

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Ivdri - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (477)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:46	08:12 16:43	07:09 17:45	06:47 19:51	05:30 20:53	04:34 21:50	04:28 22:07	05:14 21:26	06:15 20:12	07:15 18:51	07:20 16:34	08:22 15:43
2	08:48 15:47	08:10 16:45	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:52	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:24 15:42
3	08:48 15:49	08:09 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:06	05:17 21:21	06:19 20:06	07:19 18:46	07:25 16:29	08:25 15:41
4	08:47 15:50	08:07 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	07:21 18:43	07:27 16:27	08:27 15:40
5	08:47 15:51	08:05 16:52	06:58 17:54	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:57	04:33 22:04	05:23 21:15	06:25 19:59	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:56	07:58 16:59	06:50 18:00	06:28 20:05	05:15 21:07	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:57	07:56 17:01	06:48 18:03	06:25 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51	07:31 18:30	07:38 16:17	08:34 15:37
10	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:31 21:06	06:33 19:48	07:33 18:28	07:40 16:15	08:36 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:08 21:13	04:25 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 15:36
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:06 21:15	04:25 22:03	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	07:44 16:11	08:38 15:36
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	05:04 21:17	04:24 22:03	04:41 21:57	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	05:02 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:17	07:48 16:07	08:40 15:36
15	08:39 16:08	07:43 17:14	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:44 21:54	05:41 20:54	06:43 19:34	07:44 18:15	07:50 16:06	08:41 15:36
16	08:38 16:10	07:40 17:17	06:29 18:17	06:07 20:22	04:59 21:23	04:24 22:06	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	07:53 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:23 22:06	04:47 21:52	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:23 22:07	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	07:57 16:00	08:44 15:36
19	08:34 16:16	07:33 17:23	06:21 18:24	06:00 20:28	04:53 21:29	04:23 22:07	04:50 21:49	05:49 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 15:36
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:51 21:31	04:23 22:07	04:52 21:47	05:51 20:42	06:53 19:21	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:23 22:08	04:54 21:46	05:53 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 15:37
22	08:30 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08	04:55 21:44	05:55 20:37	06:57 19:16	07:59 17:57	08:05 15:54	08:47 15:37
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:37	04:46 21:36	04:24 22:08	04:57 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:34	06:08 18:34	05:47 20:39	04:45 21:38	04:24 22:08	04:59 21:41	05:59 20:32	07:01 19:10	08:03 17:53	08:09 15:51	08:48 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:43 21:39	04:24 22:08	05:01 21:39	06:01 20:30	07:03 19:08	08:05 16:50	08:11 15:50	08:48 15:39
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	04:42 21:41	04:25 22:08	05:02 21:37	06:03 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:40
27	08:22 16:32	07:14 17:41	06:00 18:40	05:40 20:45	04:40 21:43	04:25 22:08	05:04 21:35	06:05 20:25	07:07 19:02	08:09 16:45	08:15 15:47	08:48 15:41
28	08:20 16:34	07:11 17:43	05:57 18:42	05:38 20:47	04:39 21:44	04:26 22:08	05:06 21:33	06:07 20:22	07:09 18:59	08:12 16:43	08:16 15:46	08:49 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 18:57	08:14 16:41	08:18 15:45	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:36 21:47	04:27 22:07	05:10 21:29	06:11 20:17	07:13 18:54	08:16 16:38	08:20 15:44	08:49 15:44
31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:28	06:13 20:14	07:18 16:36			08:49 15:45
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jasmini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (530)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaunbruveri - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (592)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:13 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:07	05:14 21:26	06:16 20:12	07:15 18:52	07:21 16:35	08:22 15:44
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:34 21:52	04:30 22:06	05:16 21:24	06:18 20:09	07:18 18:49	07:23 16:32	08:24 15:43
3	08:48 15:49	08:09 16:48	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:06	05:18 21:22	06:20 20:07	07:20 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:51	07:01 17:52	06:39 19:57	05:24 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:22 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:53	06:59 17:55	06:36 19:59	05:22 21:02	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:02	07:24 18:41	07:29 16:26	08:28 15:40
6	08:47 15:54	08:03 16:55	06:56 17:57	06:34 20:02	05:20 21:04	04:30 21:57	04:34 22:04	05:24 21:15	06:26 20:00	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:55	08:01 16:57	06:53 17:59	06:31 20:04	05:18 21:06	04:29 21:58	04:35 22:03	05:26 21:13	06:28 20:00	07:28 18:36	07:34 16:22	08:31 15:39
8	08:45 15:57	07:58 16:59	06:51 18:01	06:29 20:06	05:16 21:08	04:28 21:59	04:36 22:02	05:28 21:11	06:30 20:04	07:30 18:33	07:36 16:20	08:33 15:39
9	08:45 15:58	07:56 17:02	06:48 18:03	06:26 20:08	05:13 21:10	04:27 22:00	04:37 22:01	05:30 21:09	06:32 20:00	07:32 18:31	07:38 16:18	08:34 15:38
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:12	04:27 22:01	04:38 22:00	05:32 21:06	06:34 20:00	07:34 18:28	07:40 16:16	08:36 15:38
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:14	04:26 22:02	04:40 21:59	05:34 21:04	06:36 20:00	07:36 18:26	07:42 16:14	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:16	04:26 22:03	04:41 21:58	05:36 21:02	06:38 20:00	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:48 17:11	06:38 18:12	06:16 20:16	05:05 21:18	04:25 22:04	04:42 21:57	05:38 20:59	06:40 20:00	07:40 18:20	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:19	04:25 22:04	04:44 21:56	05:40 20:57	06:42 20:00	07:42 18:18	07:49 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:25 22:05	04:45 21:54	05:42 20:55	06:44 20:00	07:44 18:15	07:51 16:06	08:41 15:37
16	08:38 16:11	07:41 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:06	04:47 21:53	05:44 20:52	06:46 20:00	07:46 18:13	07:53 16:04	08:42 15:37
17	08:37 16:12	07:38 17:20	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:52	05:46 20:50	06:48 20:00	07:48 18:10	07:55 16:03	08:43 15:37
18	08:35 16:14	07:36 17:22	06:24 18:22	06:03 20:26	04:56 21:27	04:24 22:07	04:50 21:50	05:48 20:48	06:49 20:00	07:51 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:34 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:49	05:50 20:45	06:51 20:00	07:53 18:05	07:59 15:59	08:45 15:37
20	08:33 16:18	07:31 17:26	06:19 18:26	05:58 20:31	04:52 21:31	04:24 22:07	04:53 21:47	05:52 20:43	06:53 20:00	07:55 18:03	08:01 15:58	08:46 15:37
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:33	04:50 21:32	04:24 22:08	04:55 21:46	05:54 20:40	06:55 20:00	07:57 18:00	08:03 15:56	08:46 15:38
22	08:30 16:22	07:26 17:31	06:14 18:30	05:53 20:35	04:49 21:34	04:24 22:08	04:56 21:44	05:56 20:38	06:57 20:00	07:59 17:58	08:05 15:55	08:47 15:38
23	08:28 16:24	07:24 17:33	06:11 18:33	05:50 20:37	04:47 21:36	04:25 22:08	04:58 21:42	05:58 20:35	06:59 20:00	08:01 17:56	08:07 15:53	08:47 15:39
24	08:27 16:27	07:21 17:35	06:08 18:35	05:48 20:39	04:46 21:38	04:25 22:08	05:00 21:41	06:00 20:33	07:01 20:00	08:03 17:53	08:09 15:52	08:48 15:39
25	08:25 16:29	07:19 17:37	06:06 18:37	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:02 20:30	07:03 20:00	08:05 17:51	08:11 15:51	08:48 15:40
26	08:23 16:31	07:16 17:39	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:03 21:37	06:04 20:28	07:05 20:00	08:07 17:48	08:13 15:49	08:48 15:41
27	08:22 16:33	07:14 17:42	06:00 18:41	05:41 20:45	04:41 21:43	04:26 22:08	05:05 21:35	06:06 20:25	07:07 20:00	08:09 17:46	08:15 15:48	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:08	05:07 21:33	06:08 20:22	07:09 20:00	08:12 17:44	08:17 15:47	08:49 15:42
29	08:18 16:37		06:55 19:45	05:36 20:49	04:38 21:46	04:27 22:07	05:09 21:32	06:10 20:20	07:11 20:00	08:14 17:41	08:18 15:46	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:11 21:30	06:12 20:17	07:13 20:00	08:16 17:39	08:20 15:45	08:49 15:44
31	08:15 16:42		06:50 19:49		04:36 21:49		05:12 21:28	06:14 20:15	07:18 20:00	08:18 17:37		08:49 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaundzelzava - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (451)  
 Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:29 22:07	05:14 21:26	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:52	04:29 22:06	05:16 21:24	06:17 20:09	07:17 18:49	07:23 16:32	08:24 15:42
3	08:48 15:49	08:09 16:48	07:04 17:50	06:42 19:55	05:26 20:57	04:32 21:53	04:30 22:06	05:18 21:21	06:19 20:07	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:07 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:26	08:28 15:40
6	08:46 15:53	08:03 16:55	06:56 17:56	06:34 20:01	05:20 21:03	04:29 21:57	04:33 22:04	05:24 21:15	06:25 19:59	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:26 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:28 21:11	06:29 19:53	07:30 18:33	07:36 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:08	05:13 21:09	04:27 22:00	04:37 22:01	05:30 21:08	06:31 19:51	07:32 18:31	07:38 16:17	08:34 15:38
10	08:44 16:00	07:54 17:04	06:45 18:05	06:23 20:10	05:11 21:11	04:26 22:01	04:38 22:00	05:32 21:06	06:33 19:48	07:34 18:28	07:40 16:15	08:36 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:03	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:38 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:57	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:10	08:39 15:36
14	08:40 16:06	07:45 17:13	06:35 18:13	06:13 20:18	05:03 21:19	04:25 22:04	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:55	06:43 19:35	07:44 18:15	07:51 16:06	08:41 15:36
16	08:38 16:10	07:40 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:13	07:53 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 19:27	07:50 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:49	05:49 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:31	04:24 22:07	04:53 21:47	05:51 20:42	06:53 19:21	07:55 18:03	08:01 15:58	08:45 15:37
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 15:37
22	08:30 16:22	07:26 17:30	06:14 18:30	05:52 20:35	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 19:16	07:59 17:58	08:05 15:55	08:47 15:38
23	08:28 16:24	07:24 17:33	06:11 18:32	05:50 20:37	04:47 21:36	04:24 22:08	04:58 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:38	04:25 22:08	04:59 21:41	05:59 20:32	07:01 19:10	08:03 17:53	08:09 15:52	08:48 15:39
25	08:25 16:28	07:19 17:37	06:06 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 19:08	08:05 17:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:39	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:40
27	08:22 16:33	07:14 17:41	06:00 18:41	05:40 20:45	04:41 21:43	04:26 22:08	05:05 21:35	06:05 20:25	07:07 19:02	08:09 16:46	08:15 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:58 18:43	05:38 20:47	04:39 21:44	04:26 22:08	05:07 21:33	06:07 20:22	07:09 19:00	08:12 16:43	08:16 15:47	08:49 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 18:57	08:14 16:41	08:18 15:46	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:30	06:11 20:17	07:13 18:54	08:16 16:39	08:20 15:44	08:49 15:44
31	08:14 16:41		06:50 19:49		04:35 21:49		05:12 21:28	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaundzitari - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (516)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12	07:09	06:47	05:31	19:55 (AP2)	04:34	04:28	05:14	20:06 (AP2)	06:15	07:15	07:20	08:22		
	15:46	16:43	17:46	19:51	20:53	20:18 (AP6.1)	21:50	22:06	21:25	37	20:43 (AP6.1)	20:12	18:52	16:34	15:43	
2	08:48	08:10	07:06	06:44	05:28	19:55 (AP2)	04:33	04:29	05:16	20:05 (AP2)	06:17	07:17	07:22	08:23		
	15:48	16:46	17:48	19:53	20:55	28	20:23 (AP6.1)	21:51	22:06	21:23	38	20:43 (AP6.1)	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	19:55 (AP2)	04:32	04:30	05:18	20:05 (AP2)	06:19	07:19	07:25	08:25		
	15:49	16:48	17:50	19:55	20:57	30	20:25 (AP6.1)	21:53	22:05	21:21	38	20:43 (AP6.1)	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	19:54 (AP2)	04:31	04:31	05:20	20:05 (AP2)	06:21	07:21	07:27	08:27		
	15:50	16:50	17:52	19:57	20:59	33	20:27 (AP6.1)	21:54	22:05	21:19	38	20:43 (AP6.1)	20:04	18:44	16:27	15:41
5	08:47	08:04	06:58	06:36	05:22	19:54 (AP2)	04:30	04:32	05:22	20:05 (AP2)	06:23	07:23	07:29	08:28		
	15:52	16:52	17:54	19:59	21:01	35	20:29 (AP6.1)	21:55	22:04	21:17	38	20:43 (AP6.1)	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	19:54 (AP2)	04:29	04:33	05:23	20:03 (AP2)	06:25	07:25	07:31	08:30		
	15:53	16:54	17:56	20:01	21:03	36	20:30 (AP6.1)	21:56	22:03	21:15	38	20:41 (AP6.1)	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	19:54 (AP2)	04:28	04:34	05:25	20:03 (AP2)	06:27	07:27	07:33	08:31		
	15:55	16:57	17:58	20:03	21:05	38	20:32 (AP6.1)	21:58	22:03	21:13	36	20:39 (AP6.1)	19:56	18:36	16:21	15:39
8	08:45	07:58	06:51	06:28	05:15	19:54 (AP2)	04:28	04:35	05:27	20:04 (AP2)	06:29	07:29	07:35	08:33		
	15:56	16:59	18:01	20:05	21:07	39	20:33 (AP6.1)	21:59	22:02	21:11	33	20:37 (AP6.1)	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:26	05:13	19:55 (AP2)	04:27	04:36	05:29	20:04 (AP2)	06:31	07:31	07:38	08:34		
	15:58	17:01	18:03	20:07	21:09	38	20:33 (AP6.1)	22:00	22:01	21:08	31	20:35 (AP6.1)	19:51	18:30	16:17	15:38
10	08:44	07:54	06:45	06:23	05:11	19:55 (AP2)	04:26	04:38	05:31	20:04 (AP2)	06:33	07:33	07:40	08:35		
	15:59	17:03	18:05	20:09	21:11	38	20:33 (AP6.1)	22:01	22:00	21:06	30	20:34 (AP6.1)	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	19:55 (AP2)	04:26	04:39	05:33	20:04 (AP2)	06:35	07:36	07:42	08:37		
	16:01	17:06	18:07	20:12	21:13	38	20:33 (AP6.1)	22:02	21:59	21:04	26	20:31 (AP6.1)	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	19:56 (AP2)	04:25	04:40	05:35	20:04 (AP2)	06:37	07:38	07:44	08:38		
	16:03	17:08	18:09	20:14	21:15	36	20:32 (AP6.1)	22:03	21:58	21:01	22	20:26 (AP2)	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	19:57 (AP2)	04:25	04:42	05:37	20:05 (AP2)	06:39	07:40	07:46	08:39		
	16:05	17:10	18:11	20:16	21:17	36	20:33 (AP6.1)	22:03	21:57	20:59	21	20:26 (AP2)	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	19:58 (AP2)	04:24	04:43	05:39	20:06 (AP2)	06:41	07:42	07:48	08:40		
	16:06	17:12	18:13	20:18	21:19	34	20:32 (AP6.1)	22:04	21:55	20:57	19	20:25 (AP2)	19:37	18:17	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	19:59 (AP2)	04:24	04:45	05:41	20:07 (AP2)	06:43	07:44	07:50	08:41		
	16:08	17:15	18:15	20:20	21:21	31	20:31 (AP6.1)	22:05	21:54	20:54	15	20:22 (AP2)	19:34	18:15	16:06	15:36
16	08:38	07:40	06:29	06:07	04:59	20:01 (AP2)	04:24	04:46	05:43	20:09 (AP2)	06:45	07:46	07:53	08:42		
	16:10	17:17	18:18	20:22	21:23	25	20:30 (AP6.1)	22:05	21:53	20:52	11	20:20 (AP2)	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	20:05 (AP2)	04:24	04:48	05:45	20:12 (AP2)	06:47	07:48	07:55	08:43		
	16:12	17:19	18:20	20:24	21:25	16	20:30 (AP6.1)	22:06	21:51	20:50	6	20:18 (AP2)	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	20:17 (AP6.1)	04:24	04:49	05:47		06:49	07:50	07:57	08:44		
	16:14	17:21	18:22	20:26	21:27	11	20:28 (AP6.1)	22:06	21:50	20:47		19:26	18:07	16:01	15:36	
19	08:34	07:33	06:21	06:00	04:53	20:20 (AP6.1)	04:23	04:51	05:49		06:51	07:52	07:59	08:45		
	16:16	17:24	18:24	20:28	21:29	7	20:27 (AP6.1)	22:07	21:48	20:45		19:24	18:05	15:59	15:37	
20	08:32	07:31	06:19	05:57	04:52		04:24	04:52	05:51		06:53	07:54	08:01	08:45		
	16:18	17:26	18:26	20:30	21:30		22:07	21:47	20:42		19:21	18:02	15:57	15:37		
21	08:31	07:28	06:16	05:55	04:50		04:24	04:54	05:53		06:55	07:57	08:03	08:46		
	16:20	17:28	18:28	20:32	21:32		22:07	21:45	20:40		19:18	18:00	15:56	15:37		
22	08:29	07:26	06:13	05:52	04:48		04:24	04:56	05:55		06:57	07:59	08:05	08:47		
	16:22	17:30	18:30	20:34	21:34		22:08	21:44	20:37		19:16	17:57	15:54	15:38		
23	08:28	07:24	06:11	05:50	04:47		04:24	04:57	05:57		06:59	08:01	08:07	08:47		
	16:24	17:32	18:32	20:36	21:36		22:08	21:42	20:35		19:13	17:55	15:53	15:38		
24	08:26	07:21	06:08	05:47	04:45		04:24	04:59	05:59		07:01	08:03	08:09	08:47		
	16:26	17:35	18:34	20:39	21:37		22:08	21:40	4	20:35 (AP6.1)	20:32	19:10	17:53	15:51	15:39	
25	08:25	07:19	06:05	05:45	04:43		04:25	05:01	06:01		07:03	07:05	08:11	08:48		
	16:28	17:37	18:36	20:41	21:39		22:08	21:39	9	20:38 (AP6.1)	20:30	19:08	16:50	15:50	15:40	
26	08:23	07:16	06:03	05:42	04:42	20:03 (AP2)	04:24	05:03	06:03		07:05	07:07	08:13	08:48		
	16:30	17:39	18:38	20:43	8	20:11 (AP2)	21:41	22:08	12	20:39 (AP6.1)	20:27	19:05	16:48	15:49	15:40	
27	08:21	07:14	06:00	05:40	04:41	20:01 (AP2)	04:41	04:26	05:05		07:07	07:09	08:14	08:48		
	16:32	17:41	18:40	20:45	12	20:13 (AP2)	21:42	22:08	21:35	22	20:41 (AP6.1)	20:25	19:02	16:46	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	19:59 (AP2)	04:39	04:26	05:06		07:09	07:12	08:16	08:48		
	16:35	17:43	18:43	20:47	16	20:15 (AP2)	21:44	22:07	21:33	28	20:42 (AP6.1)	20:22	19:00	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	19:58 (AP2)	04:38	04:27	05:08		07:11	07:14	08:18	08:48		
	16:37		19:45	20:49	19	20:17 (AP2)	21:46	22:07	21:31	33	20:42 (AP6.1)	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:37	19:56 (AP2)	04:37	04:28	05:10		07:13	07:16	08:20	08:48		
	16:39		19:47	20:51	21	20:17 (AP2)	21:47	22:07	21:29	35	20:43 (AP6.1)	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	05:12			07:18		08:20	08:48		
	16:41		19:49		21:49		21:27	36	20:43 (AP6.1)		16:36		15:44	15:45		
Potential sun hours		236	266	366	426	507		528	529		469		384	324	248	217
Total, worst case					76	572			179		477					
Sun reduction					0,44	0,56			0,47		0,52					
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	0,56			0,47		0,52					
Total, real					34	322			84		249					

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaunie Grantkalni - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (438)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:31	04:35	04:29	05:15	06:16	07:16	07:20	08:22
	15:48	16:44	17:46	19:51	20:53	21:50	22:06	21:25	20:12	18:52	16:35	15:44
2	08:48	08:11	07:06	06:45	05:29	04:34	04:30	05:17	06:18	07:18	07:23	08:23
	15:49	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:33	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:19	06:20	07:20	07:25	08:25
	15:50	16:49	17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:47	16:30	15:42
4	08:47	08:07	07:01	06:39	05:25	04:32	04:32	05:21	06:22	07:22	07:27	08:27
	15:51	16:51	17:53	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:42
5	08:47	08:05	06:59	06:37	05:22	04:31	04:33	05:22	06:24	07:24	07:29	08:28
	15:53	16:53	17:55	19:59	21:01	21:55	22:04	21:17	20:02	18:41	16:26	15:41
6	08:46	08:03	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:02	21:03	21:56	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:00	06:54	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:33	08:31
	15:56	16:58	17:59	20:04	21:05	21:57	22:02	21:13	19:56	18:36	16:22	15:40
8	08:45	07:58	06:51	06:29	05:16	04:29	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	17:00	18:01	20:06	21:07	21:59	22:02	21:11	19:54	18:34	16:20	15:39
9	08:44	07:56	06:48	06:26	05:14	04:28	04:38	05:30	06:32	07:32	07:38	08:34
	15:59	17:02	18:03	20:08	21:09	22:00	22:01	21:08	19:51	18:31	16:18	15:39
10	08:43	07:54	06:46	06:24	05:12	04:27	04:39	05:32	06:34	07:34	07:40	08:35
	16:00	17:04	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:10	04:27	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:08	20:12	21:13	22:01	21:59	21:04	19:46	18:26	16:14	15:38
12	08:42	07:50	06:40	06:18	05:08	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:04	17:09	18:10	20:14	21:15	22:02	21:58	21:02	19:43	18:23	16:12	15:38
13	08:41	07:47	06:38	06:16	05:06	04:26	04:43	05:38	06:40	07:40	07:46	08:39
	16:06	17:11	18:12	20:16	21:17	22:03	21:56	20:59	19:40	18:21	16:10	15:37
14	08:40	07:45	06:35	06:13	05:04	04:25	04:44	05:40	06:42	07:42	07:48	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:38	18:18	16:08	15:37
15	08:39	07:43	06:33	06:11	05:02	04:25	04:46	05:42	06:44	07:44	07:51	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:16	16:07	15:37
16	08:37	07:41	06:30	06:08	05:00	04:25	04:47	05:44	06:46	07:46	07:53	08:42
	16:11	17:18	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:05	15:37
17	08:36	07:38	06:27	06:06	04:58	04:25	04:49	05:46	06:48	07:48	07:55	08:43
	16:13	17:20	18:20	20:24	21:25	22:06	21:51	20:50	19:30	18:11	16:03	15:37
18	08:35	07:36	06:25	06:03	04:56	04:25	04:50	05:48	06:50	07:51	07:57	08:44
	16:15	17:22	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08	16:02	15:37
19	08:34	07:33	06:22	06:00	04:54	04:25	04:52	05:50	06:52	07:53	07:59	08:45
	16:17	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:06	16:00	15:38
20	08:32	07:31	06:19	05:58	04:53	04:25	04:53	05:52	06:54	07:55	08:01	08:45
	16:19	17:26	18:26	20:30	21:30	22:07	21:47	20:43	19:21	18:03	15:58	15:38
21	08:31	07:29	06:17	05:55	04:51	04:25	04:55	05:54	06:56	07:57	08:03	08:46
	16:21	17:29	18:28	20:33	21:32	22:07	21:45	20:40	19:19	18:01	15:57	15:38
22	08:29	07:26	06:14	05:53	04:49	04:25	04:57	05:56	06:58	07:59	08:05	08:46
	16:23	17:31	18:31	20:35	21:34	22:07	21:44	20:38	19:16	17:58	15:55	15:39
23	08:28	07:24	06:11	05:51	04:48	04:25	04:58	05:58	07:00	08:01	08:07	08:47
	16:25	17:33	18:33	20:37	21:36	22:08	21:42	20:35	19:13	17:56	15:54	15:39
24	08:26	07:21	06:09	05:48	04:46	04:26	05:00	06:00	07:02	08:03	08:09	08:47
	16:27	17:35	18:35	20:39	21:37	22:08	21:40	20:33	19:11	17:53	15:52	15:40
25	08:25	07:19	06:06	05:46	04:45	04:26	05:02	06:02	07:04	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:41
26	08:23	07:16	06:03	05:43	04:43	04:26	05:04	06:04	07:06	08:07	08:13	08:48
	16:31	17:40	18:39	20:43	21:41	22:08	21:37	20:28	19:05	17:49	15:50	15:41
27	08:21	07:14	06:01	05:41	04:42	04:27	05:06	06:06	07:08	08:09	08:14	08:48
	16:33	17:42	18:41	20:45	21:42	22:07	21:35	20:25	19:03	17:46	15:49	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:10	08:12	08:16	08:48
	16:36	17:44	18:43	20:47	21:44	22:07	21:33	20:22	19:00	17:44	15:47	15:43
29	08:18		06:55	05:36	04:39	04:28	05:09	06:10	07:12	08:14	08:18	08:48
	16:38		19:45	20:49	21:45	22:07	21:31	20:20	18:57	17:42	15:46	15:44
30	08:16		06:53	05:34	04:38	04:29	05:11	06:12	07:14	08:16	08:20	08:48
	16:40		19:47	20:51	21:47	22:07	21:29	20:17	18:55	17:39	15:45	15:45
31	08:14		06:50		04:36		05:13	06:14		07:18		08:48
	16:42		19:49		21:48		21:27	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	527	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaunie Mozuli - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (414)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:31	04:35	04:29	05:14	06:16	07:15	07:20	08:22
	15:47	16:44	17:46	19:51	20:53	21:50	22:06	21:26	20:12	18:52	16:35	15:44
2	08:48	08:11	07:06	06:44	05:29	04:34	04:30	05:16	06:18	07:17	07:23	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:24	20:09	18:49	16:32	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:18	06:20	07:19	07:25	08:25
	15:50	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:47	16:30	15:42
4	08:47	08:07	07:01	06:39	05:24	04:32	04:32	05:20	06:22	07:21	07:27	08:27
	15:51	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:41
5	08:47	08:05	06:59	06:36	05:22	04:31	04:33	05:22	06:24	07:24	07:29	08:28
	15:52	16:53	17:55	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:26	15:40
6	08:46	08:03	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:01	21:03	21:57	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:00	06:53	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:33	08:31
	15:55	16:57	17:59	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:22	15:39
8	08:45	07:58	06:51	06:29	05:16	04:28	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	16:59	18:01	20:06	21:07	21:59	22:02	21:11	19:54	18:33	16:20	15:39
9	08:44	07:56	06:48	06:26	05:13	04:27	04:37	05:30	06:32	07:32	07:38	08:34
	15:58	17:02	18:03	20:08	21:09	22:00	22:01	21:08	19:51	18:31	16:18	15:38
10	08:44	07:54	06:46	06:23	05:11	04:27	04:38	05:32	06:34	07:34	07:40	08:35
	16:00	17:04	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:09	04:26	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:46	18:26	16:14	15:37
12	08:42	07:50	06:40	06:18	05:07	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:02	19:43	18:23	16:12	15:37
13	08:41	07:47	06:38	06:16	05:05	04:25	04:42	05:38	06:40	07:40	07:46	08:39
	16:05	17:11	18:12	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:10	15:37
14	08:40	07:45	06:35	06:13	05:03	04:25	04:44	05:40	06:42	07:42	07:48	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:37	18:18	16:08	15:37
15	08:39	07:43	06:32	06:10	05:01	04:25	04:45	05:42	06:43	07:44	07:51	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:37
16	08:38	07:41	06:30	06:08	04:59	04:24	04:47	05:44	06:45	07:46	07:53	08:42
	16:11	17:17	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:04	15:37
17	08:36	07:38	06:27	06:05	04:58	04:24	04:48	05:46	06:47	07:48	07:55	08:43
	16:12	17:20	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:03	15:37
18	08:35	07:36	06:24	06:03	04:56	04:24	04:50	05:48	06:49	07:50	07:57	08:44
	16:14	17:22	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08	16:01	15:37
19	08:34	07:33	06:22	06:00	04:54	04:24	04:51	05:50	06:51	07:53	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:58	04:52	04:24	04:53	05:52	06:53	07:55	08:01	08:45
	16:18	17:26	18:26	20:30	21:31	22:07	21:47	20:43	19:21	18:03	15:58	15:37
21	08:31	07:29	06:16	05:55	04:50	04:24	04:55	05:54	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:33	21:32	22:07	21:45	20:40	19:19	18:00	15:56	15:38
22	08:30	07:26	06:14	05:53	04:49	04:24	04:56	05:56	06:57	07:59	08:05	08:47
	16:22	17:31	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:58	15:55	15:38
23	08:28	07:24	06:11	05:50	04:47	04:25	04:58	05:58	06:59	08:01	08:07	08:47
	16:25	17:33	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:39
24	08:26	07:21	06:08	05:48	04:46	04:25	05:00	06:00	07:01	08:03	08:09	08:47
	16:27	17:35	18:35	20:39	21:38	22:08	21:40	20:33	19:11	17:53	15:52	15:39
25	08:25	07:19	06:06	05:45	04:44	04:25	05:01	06:02	07:03	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:40
26	08:23	07:16	06:03	05:43	04:43	04:26	05:03	06:04	07:05	08:07	08:13	08:48
	16:31	17:39	18:39	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:41
27	08:22	07:14	06:00	05:41	04:41	04:26	05:05	06:06	07:07	08:09	08:15	08:48
	16:33	17:42	18:41	20:45	21:43	22:08	21:35	20:25	19:03	16:46	15:48	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:09	08:12	08:16	08:48
	16:35	17:44	18:43	20:47	21:44	22:07	21:33	20:22	19:00	16:44	15:47	15:43
29	08:18		06:55	05:36	04:38	04:28	05:09	06:10	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:46	15:43
30	08:16		06:52	05:33	04:37	04:28	05:11	06:12	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:55	16:39	15:45	15:44
31	08:14		06:50		04:36		05:12	06:14		07:18		08:48
	16:42		19:49		21:49		21:28	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaunkaleji - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (583)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:46	08:12 16:43	07:09 17:45	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:51	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:41
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:27	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:23 21:15	06:25 19:59	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:50 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51	07:31 18:30	07:38 16:17	08:34 15:38
10	08:43 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 19:48	07:33 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:02	04:40 21:58	05:35 21:01	06:37 19:43	07:38 18:23	07:44 16:11	08:38 15:36
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:56	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:13 20:18	05:03 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:17	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:54	06:43 19:34	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:17	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	07:52 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	07:57 16:01	08:44 15:36
19	08:34 16:16	07:33 17:24	06:21 18:24	06:00 20:28	04:53 21:29	04:23 22:07	04:51 21:48	05:49 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:30	04:24 22:07	04:52 21:47	05:51 20:42	06:53 19:21	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 19:16	07:59 17:57	08:05 15:54	08:46 15:38
23	08:28 16:24	07:23 17:32	06:11 18:32	05:50 20:36	04:47 21:36	04:24 22:08	04:57 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:24 22:08	04:59 21:40	05:59 20:32	07:01 19:10	08:03 17:53	08:09 15:51	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:43 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 19:08	08:05 16:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:40
27	08:21 16:32	07:14 17:41	06:00 18:40	05:40 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:05 20:25	07:07 19:02	08:09 16:45	08:14 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:57 18:42	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	07:09 19:00	08:12 16:43	08:16 15:46	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:19	07:11 18:57	08:14 16:41	08:18 15:45	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 18:54	08:16 16:39	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaunkaleji 1 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (581)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:27	15:41
5	08:47	08:04	06:58	06:36	05:22	04:30	04:32	05:22	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:55	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:39
8	08:45	07:58	06:50	06:28	05:15	04:28	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:38
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:05	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:24	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:57	04:52	04:24	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:40
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:41	04:26	05:05	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:35	17:43	18:42	20:47	21:44	22:07	21:33	20:22	19:00	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:37	04:28	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaunlauki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (504)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:24	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:10	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:37	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:26	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:45	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:48		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaunozoli - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (541)  
Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaunstikani - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (421)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:31	04:35	04:29	05:14	06:16	07:15	07:20	08:22
	15:47	16:44	17:46	19:51	20:53	21:50	22:06	21:25	20:12	18:52	16:35	15:44
2	08:48	08:10	07:06	06:44	05:29	04:34	04:30	05:16	06:18	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:18	06:20	07:19	07:25	08:25
	15:50	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:46	16:30	15:42
4	08:47	08:07	07:01	06:39	05:24	04:32	04:32	05:20	06:22	07:21	07:27	08:27
	15:51	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:41
5	08:47	08:04	06:58	06:36	05:22	04:31	04:33	05:22	06:24	07:23	07:29	08:28
	15:52	16:53	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:26	15:40
6	08:46	08:02	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:25	07:31	08:30
	15:54	16:55	17:57	20:01	21:03	21:56	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:00	06:53	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:33	08:31
	15:55	16:57	17:59	20:03	21:05	21:57	22:02	21:13	19:56	18:36	16:22	15:39
8	08:45	07:58	06:51	06:29	05:16	04:28	04:36	05:28	06:30	07:30	07:35	08:33
	15:57	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:20	15:39
9	08:44	07:56	06:48	06:26	05:13	04:28	04:37	05:30	06:32	07:32	07:38	08:34
	15:58	17:02	18:03	20:08	21:09	22:00	22:01	21:08	19:51	18:31	16:18	15:38
10	08:43	07:54	06:45	06:23	05:11	04:27	04:38	05:32	06:34	07:34	07:40	08:35
	16:00	17:04	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:09	04:26	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:26	16:14	15:37
12	08:42	07:50	06:40	06:18	05:07	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:02	19:43	18:23	16:12	15:37
13	08:41	07:47	06:38	06:15	05:05	04:25	04:42	05:38	06:39	07:40	07:46	08:39
	16:05	17:11	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:10	15:37
14	08:40	07:45	06:35	06:13	05:03	04:25	04:44	05:40	06:41	07:42	07:48	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:37	18:18	16:08	15:37
15	08:39	07:43	06:32	06:10	05:01	04:25	04:45	05:42	06:43	07:44	07:50	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:37
16	08:37	07:40	06:30	06:08	04:59	04:24	04:47	05:44	06:45	07:46	07:53	08:42
	16:11	17:17	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:04	15:37
17	08:36	07:38	06:27	06:05	04:58	04:24	04:48	05:46	06:47	07:48	07:55	08:43
	16:13	17:20	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:03	15:37
18	08:35	07:36	06:24	06:03	04:56	04:24	04:50	05:48	06:49	07:50	07:57	08:44
	16:14	17:22	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08	16:01	15:37
19	08:34	07:33	06:22	06:00	04:54	04:24	04:51	05:50	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:58	04:52	04:24	04:53	05:52	06:53	07:55	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:03	15:58	15:38
21	08:31	07:29	06:16	05:55	04:50	04:24	04:55	05:54	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:19	18:00	15:56	15:38
22	08:29	07:26	06:14	05:53	04:49	04:24	04:56	05:56	06:57	07:59	08:05	08:46
	16:22	17:31	18:30	20:34	21:34	22:07	21:44	20:37	19:16	17:58	15:55	15:38
23	08:28	07:24	06:11	05:50	04:47	04:25	04:58	05:58	06:59	08:01	08:07	08:47
	16:25	17:33	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:39
24	08:26	07:21	06:08	05:48	04:46	04:25	05:00	06:00	07:01	08:03	08:09	08:47
	16:27	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:11	17:53	15:52	15:39
25	08:25	07:19	06:06	05:45	04:44	04:25	05:02	06:02	07:03	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:40
26	08:23	07:16	06:03	05:43	04:43	04:26	05:03	06:04	07:05	08:07	08:13	08:48
	16:31	17:39	18:39	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:41
27	08:21	07:14	06:00	05:41	04:41	04:26	05:05	06:06	07:07	08:09	08:14	08:48
	16:33	17:42	18:41	20:45	21:42	22:07	21:35	20:25	19:02	16:46	15:48	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:09	08:12	08:16	08:48
	16:35	17:44	18:43	20:47	21:44	22:07	21:33	20:22	19:00	16:44	15:47	15:43
29	08:18		06:55	05:36	04:38	04:28	05:09	06:10	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:45	22:07	21:31	20:20	18:57	16:41	15:46	15:44
30	08:16		06:52	05:33	04:37	04:28	05:11	06:12	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:45	15:45
31	08:14		06:50		04:36		05:12	06:14		07:18		08:48
	16:42		19:49		21:48		21:27	20:14		16:37		15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaunstikani - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (589)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:31	04:35	04:29	05:14	06:16	07:15	07:20	08:22
	15:47	16:44	17:46	19:51	20:53	21:50	22:06	21:25	20:12	18:52	16:35	15:44
2	08:48	08:10	07:06	06:44	05:29	04:34	04:30	05:16	06:18	07:17	07:23	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:18	06:20	07:19	07:25	08:25
	15:50	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:47	16:30	15:42
4	08:47	08:07	07:01	06:39	05:24	04:32	04:32	05:20	06:22	07:21	07:27	08:27
	15:51	16:51	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:41
5	08:47	08:05	06:59	06:36	05:22	04:31	04:33	05:22	06:24	07:23	07:29	08:28
	15:52	16:53	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:26	15:40
6	08:46	08:02	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:01	21:03	21:56	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:00	06:53	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:33	08:31
	15:55	16:57	17:59	20:03	21:05	21:58	22:02	21:13	19:56	18:36	16:22	15:39
8	08:45	07:58	06:51	06:29	05:16	04:28	04:36	05:28	06:30	07:30	07:35	08:33
	15:57	16:59	18:01	20:06	21:07	21:59	22:02	21:11	19:53	18:33	16:20	15:39
9	08:44	07:56	06:48	06:26	05:13	04:28	04:37	05:30	06:32	07:32	07:38	08:34
	15:58	17:02	18:03	20:08	21:09	22:00	22:01	21:08	19:51	18:31	16:18	15:38
10	08:43	07:54	06:46	06:23	05:11	04:27	04:38	05:32	06:34	07:34	07:40	08:35
	16:00	17:04	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:09	04:26	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:26	16:14	15:37
12	08:42	07:50	06:40	06:18	05:07	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:02	19:43	18:23	16:12	15:37
13	08:41	07:47	06:38	06:16	05:05	04:25	04:42	05:38	06:40	07:40	07:46	08:39
	16:05	17:11	18:12	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:10	15:37
14	08:40	07:45	06:35	06:13	05:03	04:25	04:44	05:40	06:41	07:42	07:48	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:37	18:18	16:08	15:37
15	08:39	07:43	06:32	06:10	05:01	04:25	04:45	05:42	06:43	07:44	07:50	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:37
16	08:37	07:40	06:30	06:08	04:59	04:24	04:47	05:44	06:45	07:46	07:53	08:42
	16:11	17:17	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:05	15:37
17	08:36	07:38	06:27	06:05	04:58	04:24	04:48	05:46	06:47	07:48	07:55	08:43
	16:13	17:20	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:03	15:37
18	08:35	07:36	06:24	06:03	04:56	04:24	04:50	05:48	06:49	07:50	07:57	08:44
	16:14	17:22	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08	16:01	15:37
19	08:34	07:33	06:22	06:00	04:54	04:24	04:51	05:50	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	16:00	15:37
20	08:32	07:31	06:19	05:58	04:52	04:24	04:53	05:52	06:53	07:55	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:03	15:58	15:38
21	08:31	07:29	06:16	05:55	04:50	04:24	04:55	05:54	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:19	18:00	15:56	15:38
22	08:29	07:26	06:14	05:53	04:49	04:25	04:56	05:56	06:57	07:59	08:05	08:46
	16:22	17:31	18:30	20:35	21:34	22:07	21:44	20:37	19:16	17:58	15:55	15:38
23	08:28	07:24	06:11	05:50	04:47	04:25	04:58	05:58	06:59	08:01	08:07	08:47
	16:25	17:33	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:39
24	08:26	07:21	06:08	05:48	04:46	04:25	05:00	06:00	07:01	08:03	08:09	08:47
	16:27	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:11	17:53	15:52	15:39
25	08:25	07:19	06:06	05:45	04:44	04:25	05:02	06:02	07:03	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:40
26	08:23	07:16	06:03	05:43	04:43	04:26	05:03	06:04	07:05	08:07	08:13	08:48
	16:31	17:39	18:39	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:41
27	08:21	07:14	06:00	05:41	04:41	04:26	05:05	06:06	07:07	08:09	08:14	08:48
	16:33	17:42	18:41	20:45	21:42	22:07	21:35	20:25	19:02	16:46	15:48	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:09	08:12	08:16	08:48
	16:35	17:44	18:43	20:47	21:44	22:07	21:33	20:22	19:00	16:44	15:47	15:43
29	08:18		06:55	05:36	04:38	04:28	05:09	06:10	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:46	15:44
30	08:16		06:52	05:33	04:37	04:28	05:11	06:12	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:45	15:45
31	08:14		06:50		04:36		05:13	06:14		07:18		08:48
	16:42		19:49		21:48		21:27	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaunares - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (437)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:13	07:09	06:47	05:31	04:35	04:29	05:15	06:16	07:16	07:20	08:22
	15:48	16:44	17:46	19:51	20:53	21:50	22:06	21:26	20:12	18:52	16:35	15:44
2	08:48	08:11	07:06	06:45	05:29	04:34	04:30	05:17	06:18	07:18	07:23	08:23
	15:49	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:33	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:19	06:20	07:20	07:25	08:25
	15:50	16:49	17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:47	16:30	15:42
4	08:47	08:07	07:01	06:39	05:25	04:32	04:32	05:21	06:22	07:22	07:27	08:27
	15:51	16:51	17:53	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:42
5	08:47	08:05	06:59	06:37	05:22	04:31	04:33	05:22	06:24	07:24	07:29	08:28
	15:53	16:53	17:55	19:59	21:01	21:55	22:04	21:17	20:02	18:41	16:26	15:41
6	08:46	08:03	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:02	21:03	21:56	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:01	06:54	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:33	08:31
	15:56	16:58	17:59	20:04	21:05	21:58	22:03	21:13	19:56	18:36	16:22	15:40
8	08:45	07:58	06:51	06:29	05:16	04:29	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	17:00	18:01	20:06	21:07	21:59	22:02	21:11	19:54	18:34	16:20	15:39
9	08:44	07:56	06:48	06:26	05:14	04:28	04:38	05:30	06:32	07:32	07:38	08:34
	15:59	17:02	18:03	20:08	21:09	22:00	22:01	21:08	19:51	18:31	16:18	15:39
10	08:44	07:54	06:46	06:24	05:12	04:27	04:39	05:32	06:34	07:34	07:40	08:35
	16:00	17:04	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:10	04:27	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:08	20:12	21:13	22:02	21:59	21:04	19:46	18:26	16:14	15:38
12	08:42	07:50	06:40	06:18	05:08	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:04	17:09	18:10	20:14	21:15	22:02	21:58	21:02	19:43	18:23	16:12	15:38
13	08:41	07:47	06:38	06:16	05:06	04:26	04:43	05:38	06:40	07:40	07:46	08:39
	16:06	17:11	18:12	20:16	21:17	22:03	21:56	20:59	19:40	18:21	16:10	15:37
14	08:40	07:45	06:35	06:13	05:04	04:25	04:44	05:40	06:42	07:42	07:48	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:38	18:18	16:08	15:37
15	08:39	07:43	06:33	06:11	05:02	04:25	04:46	05:42	06:44	07:44	07:51	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:16	16:07	15:37
16	08:38	07:41	06:30	06:08	05:00	04:25	04:47	05:44	06:46	07:46	07:53	08:42
	16:11	17:18	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:05	15:37
17	08:36	07:38	06:27	06:06	04:58	04:25	04:49	05:46	06:48	07:48	07:55	08:43
	16:13	17:20	18:20	20:24	21:25	22:06	21:51	20:50	19:30	18:11	16:03	15:37
18	08:35	07:36	06:25	06:03	04:56	04:25	04:50	05:48	06:50	07:51	07:57	08:44
	16:15	17:22	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08	16:02	15:37
19	08:34	07:34	06:22	06:01	04:54	04:25	04:52	05:50	06:52	07:53	07:59	08:45
	16:17	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:06	16:00	15:38
20	08:32	07:31	06:19	05:58	04:53	04:25	04:53	05:52	06:54	07:55	08:01	08:45
	16:19	17:26	18:26	20:31	21:30	22:07	21:47	20:43	19:22	18:03	15:58	15:38
21	08:31	07:29	06:17	05:56	04:51	04:25	04:55	05:54	06:56	07:57	08:03	08:46
	16:21	17:29	18:28	20:33	21:32	22:07	21:45	20:40	19:19	18:01	15:57	15:38
22	08:30	07:26	06:14	05:53	04:49	04:25	04:57	05:56	06:58	07:59	08:05	08:46
	16:23	17:31	18:31	20:35	21:34	22:07	21:44	20:38	19:16	17:58	15:55	15:39
23	08:28	07:24	06:11	05:51	04:48	04:25	04:58	05:58	07:00	08:01	08:07	08:47
	16:25	17:33	18:33	20:37	21:36	22:08	21:42	20:35	19:13	17:56	15:54	15:39
24	08:26	07:21	06:09	05:48	04:46	04:26	05:00	06:00	07:02	08:03	08:09	08:47
	16:27	17:35	18:35	20:39	21:37	22:08	21:40	20:33	19:11	17:53	15:52	15:40
25	08:25	07:19	06:06	05:46	04:45	04:26	05:02	06:02	07:04	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:41
26	08:23	07:16	06:03	05:43	04:43	04:26	05:04	06:04	07:06	08:07	08:13	08:48
	16:31	17:40	18:39	20:43	21:41	22:08	21:37	20:28	19:05	17:49	15:50	15:41
27	08:22	07:14	06:01	05:41	04:42	04:27	05:06	06:06	07:08	08:09	08:15	08:48
	16:33	17:42	18:41	20:45	21:42	22:07	21:35	20:25	19:03	17:46	15:49	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:10	08:12	08:16	08:48
	16:36	17:44	18:43	20:47	21:44	22:07	21:33	20:22	19:00	17:44	15:47	15:43
29	08:18		06:55	05:36	04:39	04:28	05:09	06:10	07:12	08:14	08:18	08:48
	16:38		19:45	20:49	21:46	22:07	21:31	20:20	18:57	17:42	15:46	15:44
30	08:16		06:53	05:34	04:38	04:29	05:11	06:12	07:14	08:16	08:20	08:48
	16:40		19:47	20:51	21:47	22:07	21:29	20:17	18:55	17:39	15:45	15:45
31	08:14		06:50		04:36		05:13	06:14		07:18		08:48
	16:42		19:49		21:49		21:28	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	527	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jaurini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (572)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:29 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:07	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:24 21:15	06:25 20:01	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:26 21:13	06:27 20:01	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:28 21:11	06:29 20:01	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:37 22:01	05:29 21:08	06:31 20:01	07:31 18:30	07:38 16:17	08:34 15:38
10	08:43 15:59	07:54 17:04	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 20:01	07:34 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 20:01	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:02	04:40 21:58	05:35 21:01	06:37 20:01	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:56	05:37 20:59	06:39 20:01	07:40 18:20	07:46 16:10	08:39 15:36
14	08:40 16:06	07:45 17:13	06:35 18:13	06:13 20:18	05:03 21:19	04:25 22:04	04:43 21:55	05:39 20:57	06:41 20:01	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:54	06:43 20:01	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:18	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 20:01	07:46 18:12	07:52 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 20:01	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 20:01	07:50 18:07	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:21 18:24	06:00 20:28	04:53 21:29	04:24 22:07	04:51 21:48	05:49 20:45	06:51 20:01	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:30	04:24 22:07	04:53 21:47	05:51 20:42	06:53 20:01	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 20:01	07:57 18:00	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 20:01	07:59 17:58	08:05 15:54	08:46 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	04:47 21:36	04:24 22:08	04:58 21:42	05:57 20:35	06:59 20:01	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:25 22:08	04:59 21:40	05:59 20:32	07:01 20:01	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 20:01	08:05 17:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 20:01	08:07 17:48	08:13 15:49	08:48 15:40
27	08:21 16:33	07:14 17:41	06:00 18:40	05:40 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:05 20:25	07:07 20:01	08:09 17:46	08:14 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:57 18:43	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	07:09 20:01	08:12 17:43	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 20:01	08:14 17:41	08:18 15:45	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 20:01	08:16 17:39	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14	07:18 20:01	08:18 17:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Jumiš i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (510)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:24	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:10	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:25	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Kalna Driva - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (594)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:24	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:27	15:41
5	08:47	08:04	06:58	06:36	05:22	04:30	04:32	05:22	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:55	16:57	17:58	20:03	21:05	21:58	22:02	21:13	19:56	18:36	16:21	15:39
8	08:45	07:58	06:50	06:28	05:15	04:28	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:10	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:38
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:42	18:23	16:11	15:37
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:05	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:24	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:24	04:51	05:49	06:51	07:52	07:59	08:44
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:57	04:52	04:24	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:07	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:35	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:53	15:52	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:40
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:41	04:26	05:05	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:07	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:35	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:45	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:37	04:28	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:48		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Kalnbirzes - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (571) Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:24 21:15	06:25 20:01	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51	07:31 18:30	07:38 16:17	08:34 15:38
10	08:43 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 19:48	07:34 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:02	04:40 21:58	05:35 21:01	06:37 19:43	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:56	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:13 20:18	05:03 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:54	06:43 19:35	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:18	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	07:52 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	07:57 16:01	08:44 15:36
19	08:34 16:16	07:33 17:24	06:21 18:24	06:00 20:28	04:53 21:29	04:24 22:07	04:51 21:48	05:49 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:30	04:24 22:07	04:52 21:47	05:51 20:42	06:53 19:21	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 19:16	07:59 17:58	08:05 15:54	08:46 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	04:47 21:36	04:24 22:08	04:57 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:24 22:08	04:59 21:40	05:59 20:32	07:01 19:10	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 19:08	08:05 16:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:40
27	08:21 16:33	07:14 17:41	06:00 18:40	05:40 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:05 20:25	07:07 19:02	08:09 16:46	08:14 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:57 18:43	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	07:09 19:00	08:12 16:43	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 18:57	08:14 16:41	08:18 15:45	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 18:54	08:16 16:39	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Kalnieš i 2 (kad. apz. 76740010016001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (465) Sunshine probability S (Average daily sunshine hours) []

### Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January		February		March	April	May	June
1	08:49	10:33 (JU1)	08:13	15:06 (O6)	07:09	06:47	05:31	04:34
	15:46	71 14:05 (Pr12)	16:43	35 15:41 (O6)	17:46	19:51	20:53	21:50
2	08:48	10:35 (JU1)	08:11	15:06 (O6)	07:06	06:44	05:28	04:33
	15:48	66 14:05 (Pr12)	16:46	36 15:42 (O6)	17:48	19:53	20:55	21:52
3	08:48	12:19 (Pr11)	08:09	15:06 (O6)	07:04	06:42	05:26	04:32
	15:49	62 14:06 (Pr12)	16:48	37 15:43 (O6)	17:50	19:55	20:57	21:53
4	08:48	12:19 (Pr11)	08:07	15:06 (O6)	07:01	06:39	05:24	04:31
	15:50	62 14:06 (Pr12)	16:50	38 15:44 (O6)	17:52	19:57	21:00	21:54
5	08:47	12:20 (Pr11)	08:05	15:05 (O6)	06:59	06:36	05:22	04:30
	15:52	59 14:06 (Pr12)	16:52	39 15:44 (O6)	17:54	19:59	21:02	21:56
6	08:47	12:21 (Pr11)	08:03	15:05 (O6)	06:56	06:34	05:19	04:29
	15:53	58 14:06 (Pr12)	16:55	40 15:45 (O6)	17:56	20:01	21:04	21:57
7	08:46	12:22 (Pr11)	08:01	15:05 (O6)	06:53	06:31	05:17	04:28
	15:55	57 14:06 (Pr12)	16:57	40 15:45 (O6)	17:59	20:03	21:06	21:58
8	08:45	12:22 (Pr11)	07:58	15:05 (O6)	06:51	06:28	05:15	04:28
	15:56	56 14:06 (Pr12)	16:59	41 15:46 (O6)	18:01	20:06	21:08	21:59
9	08:45	12:23 (Pr11)	07:56	15:05 (O6)	06:48	06:26	05:13	04:27
	15:58	54 14:06 (Pr12)	17:01	40 15:45 (O6)	18:03	20:08	21:10	22:00
10	08:44	12:24 (Pr11)	07:54	15:05 (O6)	06:45	06:23	05:11	04:26
	15:59	52 14:06 (Pr12)	17:04	41 15:46 (O6)	18:05	20:10	21:12	22:01
11	08:43	12:25 (Pr11)	07:52	15:06 (O6)	06:43	06:20	05:09	04:26
	16:01	48 14:05 (Pr12)	17:06	40 15:46 (O6)	18:07	20:12	21:14	22:02
12	08:42	12:25 (Pr11)	07:50	15:05 (O6)	06:40	06:18	05:07	04:25
	16:03	45 14:04 (Pr12)	17:08	40 15:45 (O6)	18:09	20:14	21:16	22:03
13	08:41	12:26 (Pr11)	07:47	15:06 (O6)	06:38	06:15	05:05	04:25
	16:05	41 14:03 (Pr12)	17:10	39 15:45 (O6)	18:11	20:16	21:18	22:04
14	08:40	12:28 (Pr11)	07:45	15:06 (O6)	06:35	06:13	05:03	04:24
	16:06	34 14:01 (Pr12)	17:13	38 15:44 (O6)	18:13	20:18	21:20	22:04
15	08:39	12:28 (Pr11)	07:43	15:07 (O6)	06:32	06:10	05:01	04:24
	16:08	28 12:56 (Pr11)	17:15	37 15:44 (O6)	18:16	20:20	21:21	22:05
16	08:38	12:30 (Pr11)	07:41	08:08 (Pr25)	06:30	06:08	04:59	04:24
	16:10	26 12:56 (Pr11)	17:17	43 15:43 (O6)	18:18	20:22	21:23	22:06
17	08:37	12:31 (Pr11)	07:38	08:06 (Pr25)	06:27	06:05	04:57	04:24
	16:12	24 12:55 (Pr11)	17:19	45 15:43 (O6)	18:20	20:24	21:25	22:06
18	08:35	12:33 (Pr11)	07:36	08:03 (Pr25)	06:24	06:02	04:55	04:24
	16:14	21 12:54 (Pr11)	17:21	47 15:41 (O6)	18:22	20:26	21:27	22:07
19	08:34	12:34 (Pr11)	07:33	08:01 (Pr25)	06:22	06:00	04:53	04:23
	16:16	19 12:53 (Pr11)	17:24	47 15:40 (O6)	18:24	20:28	21:29	22:07
20	08:33	12:37 (Pr11)	07:31	08:00 (Pr25)	06:19	05:57	04:52	04:24
	16:18	14 12:51 (Pr11)	17:26	46 15:38 (O6)	18:26	20:31	21:31	22:07
21	08:31	12:41 (Pr11)	07:29	08:00 (Pr25)	06:16	05:55	04:50	04:24
	16:20	7 12:48 (Pr11)	17:28	42 15:37 (O6)	18:28	20:33	21:33	22:08
22	08:30		07:26	08:00 (Pr25)	06:14	05:52	04:48	04:24
	16:22		17:30	37 15:34 (O6)	18:30	20:35	21:34	22:08
23	08:28	15:20 (O6)	07:24	08:00 (Pr25)	06:11	05:50	04:47	04:24
	16:24	4 15:24 (O6)	17:33	28 15:30 (O6)	18:32	20:37	21:36	22:08
24	08:27	15:15 (O6)	07:21	08:00 (Pr25)	06:08	05:47	04:45	04:24
	16:26	14 15:29 (O6)	17:35	19 08:19 (Pr25)	18:34	20:39	21:38	22:08
25	08:25	15:13 (O6)	07:19	08:00 (Pr25)	06:06	05:45	04:44	04:25
	16:28	18 15:31 (O6)	17:37	18 08:18 (Pr25)	18:36	20:41	21:40	22:08
26	08:23	15:12 (O6)	07:16	08:02 (Pr25)	06:03	05:43	04:42	04:25
	16:30	22 15:34 (O6)	17:39	16 08:18 (Pr25)	18:39	20:43	21:41	22:08
27	08:22	15:11 (O6)	07:14	08:02 (Pr25)	06:00	05:40	04:41	04:26
	16:33	25 15:36 (O6)	17:41	14 08:16 (Pr25)	18:41	20:45	21:43	22:08
28	08:20	15:10 (O6)	07:11	08:05 (Pr25)	05:58	05:38	04:39	04:26
	16:35	28 15:38 (O6)	17:43	9 08:14 (Pr25)	18:43	20:47	21:44	22:08
29	08:18	15:09 (O6)			06:55	05:35	04:38	04:27
	16:37	30 15:39 (O6)			19:45	20:49	21:46	22:08
30	08:16	15:07 (O6)			06:52	05:33	04:37	04:28
	16:39	32 15:39 (O6)			19:47	20:51	21:47	22:07
31	08:15	15:07 (O6)			06:50		04:35	
	16:41	33 15:40 (O6)			19:49		21:49	
Potential sun hours	236		266		366	426	507	528
Total, worst case	1110		992					
Sun reduction	0,13		0,23					
Oper. time red.	1,00		1,00					
Wind dir. red.	1,00		1,00					
Total reduction	0,13		0,23					
Total, real	149		223					

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Kalnieš i 2 (kad. apz. 76740010016001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (465) Sunshine probability S (Average daily sunshine hours) []

### Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:28 22:07	05:14 21:26	06:15 20:12	07:15 18:52	07:21 16:34	14:35 (O6) 15:15 (O6)
2	04:29 22:06	05:16 21:24	06:17 20:09	07:17 18:49	07:23 16:32	15:43 15:15 (O6)
3	04:30 22:06	05:18 21:22	06:19 20:07	07:19 18:46	07:25 16:30	15:42 15:15 (O6)
4	04:31 22:05	05:20 21:20	06:21 20:04	07:21 18:44	07:27 16:28	15:41 15:15 (O6)
5	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	15:40 15:14 (O6)
6	04:33 22:04	05:24 21:15	06:25 19:59	07:25 18:38	07:31 16:23	15:39 15:15 (O6)
7	04:34 22:03	05:26 21:13	06:27 19:56	07:28 18:36	07:34 16:21	15:39 15:14 (O6)
8	04:35 22:02	05:27 21:11	06:29 19:53	07:30 18:33	07:36 16:19	15:38 15:14 (O6)
9	04:36 22:01	05:29 21:09	06:31 19:51	07:32 18:31	07:38 16:17	15:38 15:13 (O6)
10	04:38 22:00	05:31 21:06	06:33 19:48	07:34 18:28	07:40 16:15	15:36 15:12 (O6)
11	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	15:37 15:12 (O6)
12	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	07:44 16:11	15:37 15:11 (O6)
13	04:42 21:57	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	15:37 15:11 (O6)
14	04:43 21:56	05:39 20:57	06:41 19:37	07:42 18:18	07:49 16:08	15:36 15:09 (O6)
15	04:45 21:54	05:41 20:55	06:43 19:35	07:44 18:15	07:51 16:06	15:36 15:08 (O6)
16	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:13	07:53 16:04	15:36 15:07 (O6)
17	04:48 21:52	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	15:36 15:05 (O6)
18	04:49 21:50	05:47 20:47	06:49 19:27	07:50 18:08	07:57 16:01	15:36 15:03 (O6)
19	04:51 21:49	05:49 20:45	06:51 19:24	07:53 18:05	07:59 16:03 (O6)	15:37 15:03 (O6)
20	04:52 21:47	05:51 20:43	06:53 19:21	07:55 18:03	08:01 16:06 (O6)	15:37 15:03 (O6)
21	04:54 21:46	05:53 20:40	06:55 19:19	07:57 18:00	08:03 16:08 (O6)	15:37 15:03 (O6)
22	04:56 21:44	05:55 20:38	06:57 19:16	07:59 17:58	08:05 16:09 (O6)	15:37 15:03 (O6)
23	04:57 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 16:11 (O6)	15:37 15:03 (O6)
24	04:59 21:41	05:59 20:33	07:01 19:10	08:03 17:53	08:09 16:12 (O6)	15:37 15:03 (O6)
25	05:01 21:39	06:01 20:30	07:03 19:08	07:05 16:50	08:11 15:12 (O6)	15:37 15:03 (O6)
26	05:03 21:37	06:03 20:27	07:05 19:05	07:08 16:48	08:13 15:14 (O6)	15:37 15:03 (O6)
27	05:05 21:35	06:05 20:25	07:07 19:02	07:10 16:46	08:15 15:14 (O6)	15:37 15:03 (O6)
28	05:06 21:34	06:07 20:22	07:09 19:00	07:12 16:43	08:17 15:14 (O6)	15:37 15:03 (O6)
29	05:08 21:32	06:09 20:20	07:11 18:57	07:14 16:41	08:18 15:15 (O6)	15:37 15:03 (O6)
30	05:10 21:30	06:11 20:17	07:13 18:54	07:16 16:39	08:20 15:15 (O6)	15:37 15:03 (O6)
31	05:12 21:28	06:13 20:15	07:18 18:54	07:18 16:36	08:20 15:15 (O6)	15:37 15:03 (O6)
Potential sun hours	529	469	384	324	248	217
Total, worst case				623	849	2211
Sun reduction				0,29	0,08	0,08
Oper. time red.				1,00	1,00	1,00
Wind dir. red.				1,00	1,00	1,00
Total reduction				0,29	0,08	0,08
Total, real				181	64	187

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Kalnieš i 2 (kad. apz. 76740030024001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (456)

### Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	January		February		March		April	May	June
1	08:49	10:13 (JU1)	08:13		07:09	07:43 (Pr25)	06:47	05:31	04:34
	15:46	99 14:12 (Pr12)	16:43		17:46	16:01 (O6)	19:51	20:53	21:50
2	08:48	10:13 (JU1)	08:11		07:06	07:42 (Pr25)	06:44	05:28	04:33
	15:48	99 14:12 (Pr12)	16:46		17:48	16:00 (O6)	19:53	20:55	21:52
3	08:48	10:14 (JU1)	08:09		15:41 (O6)	07:43 (Pr25)	06:42	05:26	04:32
	15:49	99 14:13 (Pr12)	16:48	4	15:45 (O6)	17:50	15:59 (O6)	19:55	20:57
4	08:48	10:15 (JU1)	08:07		15:36 (O6)	07:01	07:43 (Pr25)	06:39	05:24
	15:50	97 14:13 (Pr12)	16:50	15	15:51 (O6)	17:52	15:56 (O6)	19:57	21:00
5	08:47	10:15 (JU1)	08:05		15:32 (O6)	06:59	07:44 (Pr25)	06:36	05:22
	15:52	96 14:13 (Pr12)	16:52	21	15:53 (O6)	17:54	15:53 (O6)	19:59	21:02
6	08:47	10:17 (JU1)	08:03		15:30 (O6)	06:56	07:46 (Pr25)	06:34	05:19
	15:53	96 14:14 (Pr12)	16:55	26	15:56 (O6)	17:56	15:50 (O6)	20:01	21:04
7	08:46	10:18 (JU1)	08:01		15:29 (O6)	06:53	07:49 (Pr25)	06:31	05:17
	15:55	93 14:14 (Pr12)	16:57	29	15:58 (O6)	17:59	07:54 (Pr25)	20:03	21:06
8	08:45	10:19 (JU1)	07:58		15:28 (O6)	06:51		06:28	05:15
	15:56	91 14:14 (Pr12)	16:59	32	16:00 (O6)	18:01		20:06	21:08
9	08:45	10:20 (JU1)	07:56		15:26 (O6)	06:48		06:26	05:13
	15:58	90 14:15 (Pr12)	17:01	34	16:00 (O6)	18:03		20:08	21:10
10	08:44	10:21 (JU1)	07:54		15:25 (O6)	06:45		06:23	05:11
	15:59	88 14:15 (Pr12)	17:04	37	16:02 (O6)	18:05		20:10	21:12
11	08:43	10:23 (JU1)	07:52		15:25 (O6)	06:43		06:20	05:09
	16:01	83 14:15 (Pr12)	17:06	38	16:03 (O6)	18:07		20:12	21:14
12	08:42	10:24 (JU1)	07:50		15:23 (O6)	06:40		06:18	05:07
	16:03	79 14:14 (Pr12)	17:08	41	16:04 (O6)	18:09		20:14	21:16
13	08:41	12:12 (Pr11)	07:47		15:23 (O6)	06:38		06:15	05:05
	16:05	71 14:15 (Pr12)	17:10	42	16:05 (O6)	18:11		20:16	21:18
14	08:40	12:13 (Pr11)	07:45		15:22 (O6)	06:35		06:13	05:03
	16:06	70 14:15 (Pr12)	17:13	43	16:05 (O6)	18:13		20:18	21:20
15	08:39	12:13 (Pr11)	07:43		15:22 (O6)	06:32		06:10	05:01
	16:08	68 14:14 (Pr12)	17:15	44	16:06 (O6)	18:16		20:20	21:21
16	08:38	12:14 (Pr11)	07:41		15:21 (O6)	06:30		06:08	04:59
	16:10	66 14:14 (Pr12)	17:17	45	16:06 (O6)	18:18		20:22	21:23
17	08:37	12:15 (Pr11)	07:38		15:21 (O6)	06:27		06:05	04:57
	16:12	62 14:13 (Pr12)	17:19	46	16:07 (O6)	18:20		20:24	21:25
18	08:35	12:16 (Pr11)	07:36		15:20 (O6)	06:24		06:02	04:55
	16:14	60 14:13 (Pr12)	17:21	46	16:06 (O6)	18:22		20:26	21:27
19	08:34	12:16 (Pr11)	07:33		15:21 (O6)	06:22		06:00	04:53
	16:16	56 14:11 (Pr12)	17:24	46	16:07 (O6)	18:24		20:28	21:29
20	08:33	12:17 (Pr11)	07:31		15:20 (O6)	06:19		05:57	04:52
	16:18	51 14:09 (Pr12)	17:26	46	16:06 (O6)	18:26		20:31	21:31
21	08:31	12:18 (Pr11)	07:29		15:20 (O6)	06:16		05:55	04:50
	16:20	39 12:57 (Pr11)	17:28	47	16:07 (O6)	18:28		20:33	21:33
22	08:30	12:19 (Pr11)	07:26		07:53 (Pr25)	06:14		05:52	04:48
	16:22	37 12:56 (Pr11)	17:30	49	16:06 (O6)	18:30		20:35	21:34
23	08:28	12:20 (Pr11)	07:24		07:51 (Pr25)	06:11		05:50	04:47
	16:24	36 12:56 (Pr11)	17:33	54	16:06 (O6)	18:32		20:37	21:36
24	08:27	12:21 (Pr11)	07:21		07:48 (Pr25)	06:08		05:47	04:45
	16:26	34 12:55 (Pr11)	17:35	57	16:05 (O6)	18:34		20:39	21:38
25	08:25	12:22 (Pr11)	07:19		07:45 (Pr25)	06:06		05:45	04:44
	16:28	32 12:54 (Pr11)	17:37	59	16:04 (O6)	18:36		20:41	21:40
26	08:23	12:25 (Pr11)	07:16		07:44 (Pr25)	06:03		05:43	04:42
	16:30	29 12:54 (Pr11)	17:39	61	16:04 (O6)	18:39		20:43	21:41
27	08:22	12:27 (Pr11)	07:14		07:43 (Pr25)	06:00		05:40	04:41
	16:33	25 12:52 (Pr11)	17:41	61	16:03 (O6)	18:41		20:45	21:43
28	08:20	12:29 (Pr11)	07:11		07:43 (Pr25)	05:58		05:38	04:39
	16:35	22 12:51 (Pr11)	17:43	59	16:03 (O6)	18:43		20:47	21:44
29	08:18	12:32 (Pr11)			06:55			05:35	04:38
	16:37	16 12:48 (Pr11)			19:45			20:49	21:46
30	08:16	12:36 (Pr11)			06:52			05:33	04:37
	16:39	7 12:43 (Pr11)			19:47			20:51	21:47
31	08:15				06:50				04:35
	16:41				19:49				21:49
Potential sun hours	236		266		366		426	507	528
Total, worst case	1891		1082		277				
Sun reduction	0,13		0,23		0,39				
Oper. time red.	1,00		1,00		1,00				
Wind dir. red.	1,00		1,00		1,00				
Total reduction	0,13		0,23		0,39				
Total, real	254		244		108				

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

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Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Kalnieš i 2 (kad. apz. 76740030024001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (456) Sunshine probability S (Average daily sunshine hours) []

### Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:28 22:07	05:14 21:26	06:15 20:12	07:15 18:52	07:21 16:34	14:55 (06) 15:31 (06)
2	04:29 22:06	05:16 21:24	06:17 20:09	07:17 18:49	07:23 16:32	15:43 15:30 (06)
3	04:30 22:06	05:18 21:22	06:19 20:07	07:19 18:46	07:25 16:30	15:42 15:29 (06)
4	04:31 22:05	05:20 21:20	06:21 20:04	07:21 18:44	07:27 16:28	15:41 14:59 (06)
5	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	15:42 15:25 (06)
6	04:33 22:04	05:24 21:15	06:25 19:59	07:25 18:38	07:31 16:23	15:40 15:03 (06)
7	04:34 22:03	05:26 21:13	06:27 19:56	07:28 18:36	07:34 16:21	15:39 15:20 (06)
8	04:35 22:02	05:27 21:11	06:29 19:53	07:30 18:33	07:36 16:19	15:38 15:38
9	04:36 22:01	05:29 21:09	06:31 19:51	07:32 18:31	07:38 16:17	15:37 15:38
10	04:38 22:00	05:31 21:06	06:33 19:48	07:34 18:28	07:40 16:15	15:36 15:37
11	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	15:35 15:37
12	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	07:44 16:11	15:34 12:07 (Pr11)
13	04:42 21:57	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	15:33 12:15 (Pr11)
14	04:43 21:56	05:39 20:57	06:41 19:37	07:42 18:18	07:49 16:08	15:32 12:03 (Pr11)
15	04:45 21:54	05:41 20:55	06:43 19:35	07:44 18:15	07:51 16:06	15:31 12:20 (Pr11)
16	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:13	07:53 16:04	15:30 12:01 (Pr11)
17	04:48 21:52	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	15:29 12:23 (Pr11)
18	04:49 21:50	05:47 20:47	06:49 19:27	07:50 18:08	07:57 16:01	15:28 11:59 (Pr11)
19	04:51 21:49	05:49 20:45	06:51 19:24	07:53 18:05	07:59 15:59	15:27 12:24 (Pr11)
20	04:52 21:47	05:51 20:43	06:53 19:21	07:55 18:03	08:01 15:57	15:26 11:58 (Pr11)
21	04:54 21:46	05:53 20:40	06:55 19:19	07:57 18:00	08:03 15:56	15:25 11:54 (Pr11)
22	04:56 21:44	05:55 20:38	06:57 19:16	07:59 17:58	08:05 15:54	15:24 11:53 (Pr11)
23	04:57 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	15:23 11:52 (Pr11)
24	04:59 21:41	05:59 20:33	07:01 19:10	08:03 17:53	08:09 15:52	15:22 11:51 (Pr11)
25	05:01 21:39	06:01 20:30	07:03 19:08	08:05 16:50	08:11 15:50	15:21 11:50 (Pr11)
26	05:03 21:37	06:03 20:27	07:05 19:05	08:07 16:48	08:13 15:49	15:20 11:49 (Pr11)
27	05:05 21:35	06:05 20:25	07:07 19:02	08:09 16:46	08:15 15:48	15:19 11:48 (Pr11)
28	05:06 21:34	06:07 20:22	07:09 19:00	08:11 16:43	08:17 15:47	15:18 11:47 (Pr11)
29	05:08 21:32	06:09 20:20	07:11 18:57	08:13 16:41	08:18 15:45	15:17 11:46 (Pr11)
30	05:10 21:30	06:11 20:17	07:13 18:54	08:15 16:39	08:20 15:44	15:16 11:45 (Pr11)
31	05:12 21:28	06:13 20:15		08:17 16:36	08:21 15:43	15:15 11:44 (Pr11)
Potential sun hours	529	469	384	324	248	217
Total, worst case				1186	1050	3052
Sun reduction				0,29	0,08	0,08
Oper. time red.				1,00	1,00	1,00
Wind dir. red.				1,00	1,00	1,00
Total reduction				0,29	0,08	0,08
Total, real				344	79	258

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:

Flickering\_Vestas\_V162\_Prikuli\_A

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LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Kalvani - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (469)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:49	08:13	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:46	19:51	20:53	21:50	22:07	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:23	08:24
	15:47	16:46	17:48	19:53	20:55	21:52	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:04	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:22	20:07	18:46	16:30	15:41
4	08:48	08:07	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:20	20:04	18:44	16:27	15:40
5	08:47	08:05	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:29
	15:51	16:52	17:54	19:59	21:02	21:56	22:05	21:17	20:01	18:41	16:25	15:40
6	08:47	08:03	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:04	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:01	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:34	08:32
	15:54	16:57	17:58	20:03	21:06	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:35	05:27	06:29	07:30	07:36	08:33
	15:56	16:59	18:01	20:05	21:08	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:45	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:32	07:38	08:34
	15:58	17:01	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:34	07:40	08:36
	15:59	17:03	18:05	20:10	21:12	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:50	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:18	22:04	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:49	08:40
	16:06	17:12	18:13	20:18	21:20	22:04	21:56	20:57	19:37	18:18	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:51	08:42
	16:08	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:36
16	08:38	07:41	06:30	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:18	20:22	21:23	22:06	21:53	20:52	19:32	18:12	16:04	15:36
17	08:37	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:27	18:07	16:00	15:36
19	08:34	07:33	06:22	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:55	08:01	08:46
	16:18	17:26	18:26	20:30	21:31	22:08	21:47	20:43	19:21	18:02	15:57	15:37
21	08:31	07:29	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:14	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:57	15:54	15:38
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:27	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:35	18:34	20:39	21:38	22:08	21:41	20:33	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:40	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	17:48	15:49	15:40
27	08:22	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:15	08:49
	16:32	17:41	18:41	20:45	21:43	22:08	21:35	20:25	19:02	17:46	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:17	08:49
	16:35	17:43	18:43	20:47	21:44	22:08	21:34	20:22	19:00	17:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:08	21:32	20:20	18:57	17:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:30	20:17	18:54	17:39	15:44	15:44
31	08:15		06:49		04:35		05:12	06:13		07:18		08:49
	16:41		19:49		21:49		21:28	20:15		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	385	324	248	216
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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
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 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Kamenes - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (536)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January	February	March	April	May	June
1	08:48 15:46	08:12 16:43	07:09 17:45	06:47 19:51	18:50 (PrRR3) 19:23 (Pr25)	05:31 20:53
2	08:48 15:47	08:10 16:45	07:06 17:48	06:44 19:53	18:48 (PrRR3) 19:23 (Pr25)	05:28 20:55
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	18:47 (PrRR3) 19:23 (Pr25)	05:26 20:57
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	18:48 (PrRR3) 19:23 (Pr25)	05:24 20:59
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	18:47 (PrRR3) 19:21 (Pr25)	05:21 21:01
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	18:48 (PrRR3) 19:21 (Pr25)	05:19 21:03
7	08:46 15:54	08:00 16:57	06:53 17:58	17:26 (Pr3a) 17:30 (Pr3a)	18:47 (PrRR3) 19:19 (Pr25)	05:17 21:05
8	08:45 15:56	07:58 16:59	06:50 18:01	17:23 (Pr3a) 17:32 (Pr3a)	18:47 (PrRR3) 19:15 (Pr25)	05:15 21:07
9	08:44 15:58	07:56 17:01	06:48 18:03	17:21 (Pr3a) 17:34 (Pr3a)	18:48 (PrRR3) 19:12 (PrRR3)	05:13 21:09
10	08:44 15:59	07:54 17:03	06:45 18:05	17:21 (Pr3a) 17:37 (Pr3a)	18:49 (PrRR3) 19:11 (PrRR3)	05:11 21:11
11	08:43 16:01	07:52 17:06	06:43 18:07	17:20 (Pr3a) 17:39 (Pr3a)	18:50 (PrRR3) 19:10 (PrRR3)	05:09 21:13
12	08:42 16:03	07:49 17:08	06:40 18:09	17:19 (Pr3a) 17:39 (Pr3a)	18:52 (PrRR3) 19:07 (PrRR3)	05:07 21:15
13	08:41 16:04	07:47 17:10	06:37 18:11	17:19 (Pr3a) 17:39 (Pr3a)	18:55 (PrRR3) 19:04 (PrRR3)	05:05 21:17
14	08:40 16:06	07:45 17:12	06:35 18:13	17:19 (Pr3a) 17:39 (Pr3a)	05:03 21:19	04:24 22:04
15	08:39 16:08	07:43 17:15	06:32 18:15	17:19 (Pr3a) 17:37 (Pr3a)	05:01 21:21	04:24 22:05
16	08:38 16:10	07:40 17:17	06:29 18:17	17:20 (Pr3a) 17:37 (Pr3a)	04:59 21:23	04:24 22:05
17	08:36 16:12	07:38 17:19	06:27 18:20	17:21 (Pr3a) 17:35 (Pr3a)	04:57 21:25	04:23 22:06
18	08:35 16:14	07:36 17:21	06:24 18:22	17:22 (Pr3a) 17:33 (Pr3a)	04:55 21:27	04:23 22:06
19	08:34 16:16	07:33 17:23	06:21 18:24	17:27 (Pr3a) 17:29 (Pr3a)	04:53 21:29	04:23 22:07
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:51 21:30	04:23 22:07
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:23 22:07
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	04:46 21:36	04:24 22:08
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:38	04:24 22:08
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:43 21:39	04:25 22:08
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	04:42 21:41	04:25 22:08
27	08:21 16:32	07:14 17:41	06:00 18:40	17:58 (PrRR3) 18:10 (PrRR3)	05:40 20:45	04:40 21:43
28	08:20 16:34	07:11 17:43	05:57 18:42	17:55 (PrRR3) 18:14 (Pr25)	05:38 20:47	04:39 21:44
29	08:18 16:37		06:55 19:45	18:53 (PrRR3) 19:17 (Pr25)	05:35 20:49	04:38 21:46
30	08:16 16:39		06:52 19:47	18:52 (PrRR3) 19:18 (Pr25)	05:33 20:51	04:36 21:47
31	08:14 16:41		06:49 19:49	18:50 (PrRR3) 19:20 (Pr25)	04:35 21:49	04:35 22:07
Potential sun hours	236	266	366	426	507	528
Total, worst case			294	356		
Sun reduction			0,39	0,44		
Oper. time red.			1,00	1,00		
Wind dir. red.			1,00	1,00		
Total reduction			0,39	0,44		
Total, real			115	157		

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:

Flickering\_Vestas\_V162\_Prikuli\_A

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 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Kamenes - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (536)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	July	August	September	October	November	December
1	04:28	05:14	06:15	18:49 (PrRR3)	07:15	17:59 (Pr3a)
	22:06	21:25	20:12	20	18:19 (Pr3a)	16:34
2	04:29	05:16	06:17	18:48 (PrRR3)	07:17	17:59 (Pr3a)
	22:06	21:23	20:09	22	18:18 (Pr3a)	16:32
3	04:30	05:18	06:19	18:46 (PrRR3)	07:19	17:59 (Pr3a)
	22:05	21:21	20:06	24	18:16 (Pr3a)	16:30
4	04:31	05:19	06:21	18:45 (PrRR3)	07:21	17:59 (Pr3a)
	22:05	21:19	20:04	28	18:13 (Pr3a)	16:27
5	04:32	05:21	06:23	18:43 (PrRR3)	07:23	18:00 (Pr3a)
	22:04	21:17	20:01	32	18:10 (Pr3a)	16:25
6	04:33	05:23	06:25	18:43 (PrRR3)	07:25	18:01 (Pr3a)
	22:03	21:15	19:59	33	18:07 (Pr3a)	16:23
7	04:34	05:25	06:27	18:42 (PrRR3)	07:27	18:04 (Pr3a)
	22:03	21:13	19:56	34	18:05 (Pr3a)	16:21
8	04:35	05:27	06:29	18:42 (PrRR3)	07:29	18:05 (Pr3a)
	22:02	21:11	19:53	35	18:03 (Pr3a)	16:19
9	04:36	05:29	06:31	18:42 (PrRR3)	07:31	18:03 (Pr3a)
	22:01	21:08	19:51	35	18:03 (Pr3a)	16:17
10	04:38	05:31	06:33	18:42 (PrRR3)	07:33	18:03 (Pr3a)
	22:00	21:06	19:48	35	18:03 (Pr3a)	16:15
11	04:39	05:33	06:35	18:42 (PrRR3)	07:36	18:03 (Pr3a)
	21:59	21:04	19:45	33	18:03 (Pr3a)	16:13
12	04:40	05:35	06:37	18:42 (PrRR3)	07:38	18:03 (Pr3a)
	21:58	21:02	19:43	31	18:03 (Pr3a)	16:11
13	04:42	05:37	06:39	18:43 (PrRR3)	07:40	18:03 (Pr3a)
	21:57	20:59	19:40	27	18:03 (Pr3a)	16:09
14	04:43	05:39	06:41	18:44 (PrRR3)	07:42	18:03 (Pr3a)
	21:55	20:57	19:37	23	18:03 (Pr3a)	16:07
15	04:44	05:41	06:43	18:45 (PrRR3)	07:44	18:03 (Pr3a)
	21:54	20:54	19:34	20	18:03 (Pr3a)	16:06
16	04:46	05:43	06:45	18:47 (PrRR3)	07:46	18:03 (Pr3a)
	21:53	20:52	19:32	13	18:03 (Pr3a)	16:04
17	04:47	05:45	06:47	18:51 (PrRR3)	07:48	18:03 (Pr3a)
	21:51	20:50	19:29	4	18:03 (Pr3a)	16:02
18	04:49	05:47	06:49	18:55 (PrRR3)	07:50	18:03 (Pr3a)
	21:50	20:47	19:26		18:03 (Pr3a)	16:00
19	04:51	05:49	06:51		18:03 (Pr3a)	16:00
	21:49	20:45	19:24		18:03 (Pr3a)	15:59
20	04:52	05:51	06:53		18:03 (Pr3a)	15:57
	21:47	20:42	19:21		18:03 (Pr3a)	15:57
21	04:54	05:53	06:55		18:03 (Pr3a)	15:55
	21:45	20:40	19:18		18:03 (Pr3a)	15:53
22	04:56	05:55	06:57		18:03 (Pr3a)	15:51
	21:44	20:37	19:16		18:03 (Pr3a)	15:51
23	04:57	05:57	06:59		18:03 (Pr3a)	15:49
	21:42	20:35	19:13		18:03 (Pr3a)	15:47
24	04:59	05:59	07:01		18:03 (Pr3a)	15:45
	21:40	20:32	19:10		18:03 (Pr3a)	15:43
25	05:01	06:01	07:03		18:03 (Pr3a)	15:41
	21:39	20:30	19:08	9	18:03 (Pr3a)	15:39
26	05:03	06:03	07:05		18:03 (Pr3a)	15:37
	21:37	20:27	19:05	14	18:03 (Pr3a)	15:35
27	05:04	06:05	07:07		18:03 (Pr3a)	15:33
	21:35	20:25	19:02	17	18:03 (Pr3a)	15:31
28	05:06	06:07	07:09		18:03 (Pr3a)	15:29
	21:33	20:22	18:59	18	18:03 (Pr3a)	15:27
29	05:08	06:09	07:11		18:03 (Pr3a)	15:25
	21:31	20:20	18:57	19	18:03 (Pr3a)	15:23
30	05:10	06:11	18:54 (PrRR3)		18:03 (Pr3a)	15:21
	21:29	20:17	19:04 (PrRR3)	20	18:03 (Pr3a)	15:19
31	05:12	06:13	18:51 (PrRR3)		18:03 (Pr3a)	15:17
	21:27	20:14	19:07 (PrRR3)		18:03 (Pr3a)	15:15
Potential sun hours	529	469	384	324	248	217
Total, worst case		26	546	87		
Sun reduction		0,52	0,43	0,29		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		1,00	1,00	1,00		
Total reduction		0,52	0,43	0,29		
Total, real		14	236	25		

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

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 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Kamiš i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (585)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:27	15:41
5	08:47	08:04	06:58	06:36	05:22	04:30	04:32	05:22	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:55	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:39
8	08:45	07:58	06:50	06:28	05:15	04:28	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:38
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:24	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:57	04:52	04:24	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:41	04:26	05:05	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:35	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:37	04:28	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Karklini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (464)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:49	08:13	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:46	19:51	20:53	21:50	22:07	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:23	08:24
	15:48	16:46	17:48	19:53	20:55	21:52	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:04	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:22	20:07	18:46	16:30	15:41
4	08:48	08:07	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	21:00	21:54	22:05	21:20	20:04	18:44	16:27	15:41
5	08:47	08:05	06:58	06:36	05:22	04:30	04:32	05:21	06:23	07:23	07:29	08:29
	15:52	16:52	17:54	19:59	21:02	21:56	22:05	21:17	20:01	18:41	16:25	15:40
6	08:47	08:03	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:04	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:01	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:28	07:34	08:32
	15:54	16:57	17:59	20:03	21:06	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:35	05:27	06:29	07:30	07:36	08:33
	15:56	16:59	18:01	20:06	21:08	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:45	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:32	07:38	08:34
	15:58	17:01	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:34	07:40	08:36
	15:59	17:03	18:05	20:10	21:12	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:50	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:38	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:18	22:04	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:49	08:40
	16:06	17:12	18:13	20:18	21:20	22:04	21:56	20:57	19:37	18:18	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:51	08:42
	16:08	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:36
16	08:38	07:41	06:30	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:18	20:22	21:23	22:06	21:53	20:52	19:32	18:12	16:04	15:36
17	08:37	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:27	18:07	16:01	15:36
19	08:34	07:33	06:22	06:00	04:53	04:23	04:51	05:49	06:51	07:53	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33	07:31	06:19	05:57	04:52	04:23	04:52	05:51	06:53	07:55	08:01	08:46
	16:18	17:26	18:26	20:30	21:31	22:08	21:47	20:43	19:21	18:02	15:57	15:37
21	08:31	07:29	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:14	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:58	15:54	15:38
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:27	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:35	18:34	20:39	21:38	22:08	21:41	20:33	19:10	17:53	15:51	15:39
25	08:25	07:19	06:06	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:40	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:39	20:43	21:41	22:08	21:37	20:27	19:05	17:48	15:49	15:40
27	08:22	07:14	06:00	05:40	04:40	04:26	05:04	06:05	07:07	08:09	08:15	08:49
	16:32	17:41	18:41	20:45	21:43	22:08	21:35	20:25	19:02	17:46	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:17	08:49
	16:35	17:43	18:43	20:47	21:44	22:08	21:34	20:22	19:00	17:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:19	08:49
	16:37		19:45	20:49	21:46	22:08	21:32	20:20	18:57	17:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:30	20:17	18:54	17:39	15:44	15:44
31	08:15		06:49		04:35		05:12	06:13		07:18		08:49
	16:41		19:49		21:49		21:28	20:15		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Klavinas - Shadow Receptor:  $1,0 \times 1,0$  Azimuth:  $3,1^\circ$  Slope:  $90,0^\circ$  (515)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Klavu Sala - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (444)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:13	07:09	06:47	05:32	04:35	04:30	05:15	06:16	07:16	07:21	08:22
	15:48	16:44	17:46	19:51	20:53	21:50	22:06	21:26	20:12	18:52	16:35	15:44
2	08:48	08:11	07:06	06:45	05:29	04:34	04:30	05:17	06:18	07:18	07:23	08:23
	15:49	16:47	17:48	19:53	20:55	21:51	22:06	21:24	20:10	18:50	16:33	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:19	06:20	07:20	07:25	08:25
	15:50	16:49	17:51	19:55	20:57	21:53	22:05	21:22	20:07	18:47	16:31	15:43
4	08:47	08:07	07:01	06:39	05:25	04:32	04:32	05:21	06:22	07:22	07:27	08:27
	15:51	16:51	17:53	19:58	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:42
5	08:47	08:05	06:59	06:37	05:23	04:31	04:33	05:23	06:24	07:24	07:29	08:28
	15:53	16:53	17:55	20:00	21:01	21:55	22:04	21:17	20:02	18:42	16:26	15:41
6	08:46	08:03	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:02	21:04	21:56	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:01	06:54	06:32	05:18	04:30	04:35	05:26	06:28	07:28	07:34	08:31
	15:56	16:58	17:59	20:04	21:06	21:58	22:03	21:13	19:56	18:36	16:22	15:40
8	08:45	07:58	06:51	06:29	05:16	04:29	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	17:00	18:01	20:06	21:08	21:59	22:02	21:11	19:54	18:34	16:20	15:39
9	08:44	07:56	06:48	06:26	05:14	04:28	04:38	05:30	06:32	07:32	07:38	08:34
	15:59	17:02	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:31	16:18	15:39
10	08:44	07:54	06:46	06:24	05:12	04:27	04:39	05:32	06:34	07:34	07:40	08:35
	16:00	17:04	18:06	20:10	21:12	22:01	22:00	21:06	19:48	18:29	16:16	15:38
11	08:43	07:52	06:43	06:21	05:10	04:27	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:07	18:08	20:12	21:14	22:02	21:59	21:04	19:46	18:26	16:14	15:38
12	08:42	07:50	06:41	06:18	05:08	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:04	17:09	18:10	20:14	21:15	22:02	21:58	21:02	19:43	18:23	16:12	15:38
13	08:41	07:48	06:38	06:16	05:06	04:26	04:43	05:38	06:40	07:40	07:46	08:39
	16:06	17:11	18:12	20:16	21:17	22:03	21:57	20:59	19:40	18:21	16:10	15:37
14	08:40	07:45	06:35	06:13	05:04	04:26	04:44	05:40	06:42	07:42	07:49	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:38	18:18	16:09	15:37
15	08:39	07:43	06:33	06:11	05:02	04:25	04:46	05:42	06:44	07:44	07:51	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:16	16:07	15:37
16	08:38	07:41	06:30	06:08	05:00	04:25	04:47	05:44	06:46	07:46	07:53	08:42
	16:11	17:18	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:05	15:37
17	08:36	07:38	06:27	06:06	04:58	04:25	04:49	05:46	06:48	07:49	07:55	08:43
	16:13	17:20	18:20	20:24	21:25	22:06	21:51	20:50	19:30	18:11	16:03	15:37
18	08:35	07:36	06:25	06:03	04:56	04:25	04:50	05:48	06:50	07:51	07:57	08:44
	16:15	17:22	18:22	20:26	21:27	22:06	21:50	20:48	19:27	18:08	16:02	15:38
19	08:34	07:34	06:22	06:01	04:54	04:25	04:52	05:50	06:52	07:53	07:59	08:45
	16:17	17:24	18:24	20:29	21:29	22:07	21:49	20:45	19:24	18:06	16:00	15:38
20	08:33	07:31	06:19	05:58	04:53	04:25	04:53	05:52	06:54	07:55	08:01	08:45
	16:19	17:27	18:26	20:31	21:31	22:07	21:47	20:43	19:22	18:03	15:58	15:38
21	08:31	07:29	06:17	05:56	04:51	04:25	04:55	05:54	06:56	07:57	08:03	08:46
	16:21	17:29	18:29	20:33	21:32	22:07	21:45	20:40	19:19	18:01	15:57	15:38
22	08:30	07:26	06:14	05:53	04:49	04:25	04:57	05:56	06:58	07:59	08:05	08:47
	16:23	17:31	18:31	20:35	21:34	22:08	21:44	20:38	19:16	17:58	15:55	15:39
23	08:28	07:24	06:11	05:51	04:48	04:25	04:59	05:58	07:00	08:01	08:07	08:47
	16:25	17:33	18:33	20:37	21:36	22:08	21:42	20:35	19:14	17:56	15:54	15:39
24	08:27	07:21	06:09	05:48	04:46	04:26	05:00	06:00	07:02	08:03	08:09	08:47
	16:27	17:35	18:35	20:39	21:38	22:08	21:41	20:33	19:11	17:53	15:53	15:40
25	08:25	07:19	06:06	05:46	04:45	04:26	05:02	06:02	07:04	08:05	08:11	08:48
	16:29	17:38	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:41
26	08:23	07:17	06:03	05:43	04:43	04:26	05:04	06:04	07:06	08:07	08:13	08:48
	16:31	17:40	18:39	20:43	21:41	22:08	21:37	20:28	19:05	17:49	15:50	15:41
27	08:22	07:14	06:01	05:41	04:42	04:27	05:06	06:06	07:08	08:09	08:15	08:48
	16:33	17:42	18:41	20:45	21:43	22:08	21:35	20:25	19:03	17:46	15:49	15:42
28	08:20	07:12	05:58	05:39	04:40	04:27	05:07	06:08	07:10	08:12	08:16	08:48
	16:36	17:44	18:43	20:47	21:44	22:07	21:33	20:23	19:00	17:44	15:48	15:43
29	08:18		06:55	05:36	04:39	04:28	05:09	06:10	07:12	08:14	08:18	08:48
	16:38		19:45	20:49	21:46	22:07	21:31	20:20	18:57	17:42	15:46	15:44
30	08:16		06:53	05:34	04:38	04:29	05:11	06:12	07:14	08:16	08:20	08:48
	16:40		19:47	20:51	21:47	22:07	21:30	20:17	18:55	17:39	15:45	15:45
31	08:14		06:50		04:36		05:13	06:14		07:18		08:48
	16:42		19:49		21:49		21:28	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		



## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Laimnieki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (415)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January	February	March	April	May	June
1	08:48	08:13	07:09	16:22 (DD3)	06:47	18:52 (O3)
	15:47	16:44	17:46	18	16:40 (DD3)	19:51
2	08:48	08:11	07:06	16:23 (DD3)	06:44	19:01 (O3)
	15:48	16:46	17:48	14	16:37 (DD3)	19:53
3	08:48	08:09	07:04	16:28 (DD3)	06:42	19:53
	15:50	16:48	17:50	5	16:33 (DD3)	19:55
4	08:47	08:07	07:01		06:39	20:57
	15:51	16:51	17:52		19:57	20:59
5	08:47	08:05	06:59	17:22 (DD1)	06:36	20:52
	15:52	16:53	17:55	3	17:25 (DD1)	19:59
6	08:46	15:10 (P19.2b)	08:03	17:20 (DD1)	06:34	21:01
	15:54	15:12 (P19.2b)	16:55	17:57	8	17:28 (DD1)
7	08:46	15:10 (P19.2b)	08:00	06:53	17:18 (DD1)	06:31
	15:55	15:14 (P19.2b)	16:57	17:59	12	17:30 (DD1)
8	08:45	15:09 (P19.2b)	07:58	06:51	17:16 (DD1)	06:29
	15:57	15:15 (P19.2b)	16:59	18:01	16	17:32 (DD1)
9	08:44	15:09 (P19.2b)	07:56	06:48	17:16 (DD1)	06:26
	15:58	15:17 (P19.2b)	17:02	18:03	19	17:35 (DD1)
10	08:44	15:09 (P19.2b)	07:54	16:31 (O5)	06:46	17:15 (DD1)
	16:00	15:19 (P19.2b)	17:04	1	16:32 (O5)	18:05
11	08:43	15:09 (P19.2b)	07:52	16:28 (O5)	06:43	17:14 (DD1)
	16:02	15:21 (P19.2b)	17:06	6	16:34 (O5)	18:07
12	08:42	15:09 (P19.2b)	07:50	16:27 (O5)	06:40	17:15 (DD1)
	16:03	15:23 (P19.2b)	17:08	10	16:37 (O5)	18:09
13	08:41	15:10 (P19.2b)	07:47	16:27 (O5)	06:38	17:14 (DD1)
	16:05	15:26 (P19.2b)	17:11	12	16:39 (O5)	18:12
14	08:40	15:09 (P19.2b)	07:45	16:24 (DD3)	06:35	17:14 (DD1)
	16:07	15:27 (P19.2b)	17:13	17	16:41 (O5)	18:14
15	08:39	15:10 (P19.2b)	07:43	16:23 (DD3)	06:32	17:16 (DD1)
	16:09	15:29 (P19.2b)	17:15	21	16:44 (O5)	18:16
16	08:38	15:09 (P19.2b)	07:41	16:21 (DD3)	06:30	17:17 (DD1)
	16:11	15:29 (P19.2b)	17:17	23	16:44 (O5)	18:18
17	08:36	15:10 (P19.2b)	07:38	16:20 (DD3)	06:27	17:18 (DD1)
	16:13	15:30 (P19.2b)	17:20	24	16:44 (DD3)	18:20
18	08:35	15:10 (P19.2b)	07:36	16:19 (DD3)	06:24	17:19 (DD1)
	16:15	15:29 (P19.2b)	17:22	25	16:44 (DD3)	18:22
19	08:34	15:11 (P19.2b)	07:33	16:19 (DD3)	06:22	17:18 (DD1)
	16:16	15:30 (P19.2b)	17:24	26	16:45 (DD3)	18:24
20	08:32	15:11 (P19.2b)	07:31	16:18 (DD3)	06:19	17:17 (DD1)
	16:18	15:30 (P19.2b)	17:26	27	16:45 (DD3)	18:26
21	08:31	15:11 (P19.2b)	07:29	16:18 (DD3)	06:16	17:55 (O3)
	16:20	15:30 (P19.2b)	17:28	28	16:46 (DD3)	18:28
22	08:30	15:13 (P19.2b)	07:26	16:17 (DD3)	06:14	17:53 (O3)
	16:23	15:31 (P19.2b)	17:31	28	16:45 (DD3)	18:30
23	08:28	15:13 (P19.2b)	07:24	16:18 (DD3)	06:11	17:51 (O3)
	16:25	15:30 (P19.2b)	17:33	27	16:45 (DD3)	18:32
24	08:26	15:14 (P19.2b)	07:21	16:18 (DD3)	06:08	17:50 (O3)
	16:27	15:30 (P19.2b)	17:35	27	16:45 (DD3)	18:35
25	08:25	15:15 (P19.2b)	07:19	16:18 (DD3)	06:06	17:50 (O3)
	16:29	15:29 (P19.2b)	17:37	26	16:44 (DD3)	18:37
26	08:23	15:16 (P19.2b)	07:16	16:19 (DD3)	06:03	17:49 (O3)
	16:31	15:28 (P19.2b)	17:39	25	16:44 (DD3)	18:39
27	08:22	15:19 (P19.2b)	07:14	16:19 (DD3)	06:00	17:48 (O3)
	16:33	15:26 (P19.2b)	17:42	23	16:42 (DD3)	18:41
28	08:20		07:11	16:21 (DD3)	05:58	17:49 (O3)
	16:35		17:44	21	16:42 (DD3)	18:43
29	08:18				06:55	18:49 (O3)
	16:37				19:45	19:07 (O3)
30	08:16				06:52	18:49 (O3)
	16:40				19:47	19:05 (O3)
31	08:14				06:50	18:51 (O3)
	16:42				19:49	19:04 (O3)
Potential sun hours	236	266	366		426	507
Total, worst case	309	397	404		9	
Sun reduction	0,13	0,22	0,39		0,44	
Oper. time red.	1,00	1,00	1,00		1,00	
Wind dir. red.	1,00	1,00	1,00		1,00	
Total reduction	0,13	0,22	0,39		0,44	
Total, real	41	89	158		4	

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Laimnieki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (415)  
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	July	August	September	October	November	December
1	04:29 22:06	05:14 21:26	06:16 20:12	07:15 18:52	17:54 (DD1) 18:14 (DD1)	07:20 16:35
2	04:30 22:06	05:16 21:24	06:18 20:09	07:17 18:49	17:53 (DD1) 18:14 (DD1)	07:23 16:32
3	04:31 22:05	05:18 21:21	06:20 20:07	07:19 18:47	17:53 (DD1) 18:13 (DD1)	07:25 16:30
4	04:32 22:05	05:20 21:19	06:22 20:04	07:22 18:44	17:53 (DD1) 18:13 (DD1)	07:27 16:28
5	04:33 22:04	05:22 21:17	06:24 20:01	07:24 18:41	17:53 (DD1) 18:10 (DD1)	07:29 16:26
6	04:34 22:03	05:24 21:15	06:26 19:59	07:26 18:39	17:53 (DD1) 18:08 (DD1)	07:31 16:24
7	04:35 22:03	05:26 21:13	06:28 19:56	07:28 18:36	17:54 (DD1) 18:05 (DD1)	07:33 16:22
8	04:36 22:02	05:28 21:11	06:30 19:54	07:30 18:33	17:56 (DD1) 18:02 (DD1)	07:36 16:20
9	04:37 22:01	05:30 21:08	06:32 19:51	07:32 18:31	07:38 16:18	08:34 15:38
10	04:38 22:00	05:32 21:06	06:34 19:48	07:34 18:28	07:40 16:16	08:35 15:38
11	04:40 21:59	05:34 21:04	06:36 19:46	07:36 18:26	17:00 (DD3) 17:09 (DD3)	07:42 16:14
12	04:41 21:58	05:36 21:02	06:38 19:43	07:38 18:23	16:56 (DD3) 17:12 (DD3)	07:44 16:12
13	04:42 21:57	05:38 20:59	06:40 19:40	07:40 18:20	16:54 (DD3) 17:13 (DD3)	07:46 16:10
14	04:44 21:55	05:40 20:57	06:42 19:38	07:42 18:18	16:52 (DD3) 17:14 (DD3)	07:48 16:08
15	04:45 21:54	05:42 20:55	06:44 19:35	07:44 18:15	16:52 (DD3) 17:16 (DD3)	07:51 16:06
16	04:47 21:53	05:44 20:52	06:46 19:32	07:46 18:13	16:50 (DD3) 17:16 (DD3)	07:53 16:05
17	04:48 21:51	05:46 20:50	06:47 19:29	07:48 18:10	16:50 (DD3) 17:16 (DD3)	07:55 16:03
18	04:50 21:50	05:48 20:47	06:49 19:27	07:50 18:08	16:49 (DD3) 17:16 (DD3)	07:57 16:01
19	04:51 21:49	05:50 20:45	06:51 19:24	07:53 18:05	16:48 (DD3) 17:16 (DD3)	07:59 16:00
20	04:53 21:47	05:52 20:43	06:53 19:21	07:55 18:03	16:49 (DD3) 17:16 (DD3)	08:01 15:58
21	04:55 21:45	05:54 20:40	06:55 19:19	07:57 18:00	16:48 (DD3) 17:16 (DD3)	08:03 15:56
22	04:56 21:44	05:56 20:38	06:57 19:16	07:59 18:40 (O3)	16:48 (DD3) 17:15 (DD3)	08:05 15:55
23	04:58 21:42	05:58 20:35	06:59 19:13	08:01 17:56	16:49 (DD3) 17:15 (DD3)	08:07 15:54
24	05:00 21:40	06:00 20:33	07:01 19:11	08:03 17:53	16:50 (DD3) 17:14 (DD3)	08:09 15:52
25	05:02 21:39	06:02 20:30	07:03 19:08	07:05 16:51	15:50 (DD3) 16:14 (O5)	08:11 15:51
26	05:03 21:37	06:04 20:27	07:05 19:05	07:07 18:02 (DD1)	15:52 (DD3) 16:14 (O5)	08:13 15:49
27	05:05 21:35	06:06 20:25	07:07 19:03	07:10 18:12 (DD1)	15:53 (DD3) 16:13 (O5)	08:15 15:48
28	05:07 21:33	06:08 20:22	07:09 19:00	07:12 18:13 (DD1)	15:54 (DD3) 16:10 (O5)	08:16 15:47
29	05:09 21:31	06:10 20:20	07:11 18:57	07:14 18:14 (DD1)	15:56 (O5) 16:08 (O5)	08:18 15:46
30	05:11 21:29	06:12 20:17	07:13 18:55	07:16 18:14 (DD1)	15:57 (O5) 16:06 (O5)	08:20 15:45
31	05:13 21:28	06:14 20:15		07:18 16:37	15:58 (O5) 16:03 (O5)	08:21 15:46
Potential sun hours	528	469	384	324	248	217
Total, worst case			252	567	269	42
Sun reduction			0,43	0,29	0,08	0,08
Oper. time red.			1,00	1,00	1,00	1,00
Wind dir. red.			1,00	1,00	1,00	1,00
Total reduction			0,43	0,29	0,08	0,08
Total, real			109	164	20	4

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

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0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Lapegles - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (514)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:05	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

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0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Latini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (440)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:31	04:35	04:29	05:15	06:16	07:16	07:20	08:22
	15:48	16:44	17:46	19:51	20:53	21:50	22:06	21:25	20:12	18:52	16:35	15:44
2	08:48	08:11	07:06	06:45	05:29	04:34	04:30	05:17	06:18	07:18	07:23	08:23
	15:49	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:33	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:19	06:20	07:20	07:25	08:25
	15:50	16:49	17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:47	16:30	15:42
4	08:47	08:07	07:01	06:39	05:25	04:32	04:32	05:21	06:22	07:22	07:27	08:27
	15:51	16:51	17:53	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:42
5	08:47	08:05	06:59	06:37	05:22	04:31	04:33	05:22	06:24	07:24	07:29	08:28
	15:53	16:53	17:55	19:59	21:01	21:55	22:04	21:17	20:02	18:41	16:26	15:41
6	08:46	08:03	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:02	21:03	21:56	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:00	06:54	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:33	08:31
	15:56	16:58	17:59	20:04	21:05	21:57	22:02	21:13	19:56	18:36	16:22	15:40
8	08:45	07:58	06:51	06:29	05:16	04:29	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	17:00	18:01	20:06	21:07	21:59	22:02	21:11	19:54	18:34	16:20	15:39
9	08:44	07:56	06:48	06:26	05:14	04:28	04:38	05:30	06:32	07:32	07:38	08:34
	15:59	17:02	18:03	20:08	21:09	22:00	22:01	21:08	19:51	18:31	16:18	15:39
10	08:43	07:54	06:46	06:24	05:12	04:27	04:39	05:32	06:34	07:34	07:40	08:35
	16:00	17:04	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:10	04:27	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:08	20:12	21:13	22:01	21:59	21:04	19:46	18:26	16:14	15:38
12	08:42	07:50	06:40	06:18	05:08	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:04	17:09	18:10	20:14	21:15	22:02	21:58	21:02	19:43	18:23	16:12	15:38
13	08:41	07:47	06:38	06:16	05:06	04:26	04:43	05:38	06:40	07:40	07:46	08:39
	16:06	17:11	18:12	20:16	21:17	22:03	21:56	20:59	19:40	18:21	16:10	15:37
14	08:40	07:45	06:35	06:13	05:04	04:25	04:44	05:40	06:42	07:42	07:48	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:38	18:18	16:08	15:37
15	08:39	07:43	06:33	06:11	05:02	04:25	04:46	05:42	06:44	07:44	07:51	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:16	16:07	15:37
16	08:38	07:41	06:30	06:08	05:00	04:25	04:47	05:44	06:46	07:46	07:53	08:42
	16:11	17:18	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:05	15:37
17	08:36	07:38	06:27	06:06	04:58	04:25	04:49	05:46	06:48	07:48	07:55	08:43
	16:13	17:20	18:20	20:24	21:25	22:06	21:51	20:50	19:30	18:11	16:03	15:37
18	08:35	07:36	06:25	06:03	04:56	04:25	04:50	05:48	06:50	07:51	07:57	08:44
	16:15	17:22	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08	16:02	15:37
19	08:34	07:34	06:22	06:00	04:54	04:25	04:52	05:50	06:52	07:53	07:59	08:45
	16:17	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:06	16:00	15:38
20	08:32	07:31	06:19	05:58	04:53	04:25	04:53	05:52	06:54	07:55	08:01	08:45
	16:19	17:26	18:26	20:30	21:30	22:07	21:47	20:43	19:21	18:03	15:58	15:38
21	08:31	07:29	06:17	05:55	04:51	04:25	04:55	05:54	06:56	07:57	08:03	08:46
	16:21	17:29	18:28	20:33	21:32	22:07	21:45	20:40	19:19	18:01	15:57	15:38
22	08:30	07:26	06:14	05:53	04:49	04:25	04:57	05:56	06:58	07:59	08:05	08:46
	16:23	17:31	18:31	20:35	21:34	22:07	21:44	20:38	19:16	17:58	15:55	15:39
23	08:28	07:24	06:11	05:51	04:48	04:25	04:58	05:58	07:00	08:01	08:07	08:47
	16:25	17:33	18:33	20:37	21:36	22:08	21:42	20:35	19:13	17:56	15:54	15:39
24	08:26	07:21	06:09	05:48	04:46	04:26	05:00	06:00	07:02	08:03	08:09	08:47
	16:27	17:35	18:35	20:39	21:37	22:08	21:40	20:33	19:11	17:53	15:52	15:40
25	08:25	07:19	06:06	05:46	04:45	04:26	05:02	06:02	07:04	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:41
26	08:23	07:16	06:03	05:43	04:43	04:26	05:04	06:04	07:06	08:07	08:13	08:48
	16:31	17:40	18:39	20:43	21:41	22:08	21:37	20:28	19:05	17:49	15:50	15:41
27	08:22	07:14	06:01	05:41	04:42	04:27	05:06	06:06	07:08	08:09	08:15	08:48
	16:33	17:42	18:41	20:45	21:42	22:07	21:35	20:25	19:03	17:46	15:49	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:10	08:12	08:16	08:48
	16:36	17:44	18:43	20:47	21:44	22:07	21:33	20:22	19:00	17:44	15:47	15:43
29	08:18		06:55	05:36	04:39	04:28	05:09	06:10	07:12	08:14	08:18	08:48
	16:38		19:45	20:49	21:46	22:07	21:31	20:20	18:57	17:42	15:46	15:44
30	08:16		06:53	05:34	04:38	04:29	05:11	06:12	07:14	08:16	08:20	08:48
	16:40		19:47	20:51	21:47	22:07	21:29	20:17	18:55	17:39	15:45	15:45
31	08:14		06:50		04:36		05:13	06:14		07:18		08:48
	16:42		19:49		21:48		21:27	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	527	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Laucini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (473)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:49	08:13	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:46	19:51	20:53	21:50	22:07	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:23	08:24
	15:47	16:45	17:48	19:53	20:55	21:52	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:04	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:22	20:07	18:46	16:30	15:41
4	08:48	08:07	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:20	20:04	18:44	16:27	15:40
5	08:47	08:05	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:29
	15:51	16:52	17:54	19:59	21:02	21:56	22:05	21:17	20:01	18:41	16:25	15:40
6	08:47	08:03	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:04	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:01	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:34	08:32
	15:54	16:57	17:58	20:03	21:06	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:36	08:33
	15:56	16:59	18:01	20:05	21:08	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:45	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:32	07:38	08:34
	15:58	17:01	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:34	07:40	08:36
	15:59	17:03	18:05	20:10	21:12	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:50	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:18	22:04	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:49	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:56	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:51	08:42
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:36
16	08:38	07:41	06:30	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:18	20:22	21:23	22:06	21:53	20:52	19:32	18:12	16:04	15:36
17	08:37	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:27	18:07	16:00	15:36
19	08:34	07:33	06:22	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:55	08:01	08:46
	16:18	17:26	18:26	20:30	21:31	22:08	21:47	20:43	19:21	18:02	15:57	15:37
21	08:31	07:29	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:27	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:35	18:34	20:39	21:38	22:08	21:41	20:33	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:40	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	17:48	15:49	15:40
27	08:22	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:15	08:49
	16:32	17:41	18:41	20:45	21:43	22:08	21:35	20:25	19:02	17:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:17	08:49
	16:34	17:43	18:43	20:47	21:44	22:08	21:34	20:22	19:00	17:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:08	21:32	20:20	18:57	17:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:30	20:17	18:54	17:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:49
	16:41		19:49		21:49		21:28	20:15		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	385	324	247	216
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Lielo Oriš u 2 maju zeme - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (482)  
 Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January	February	March	April	May	June
1	08:48	08:12	15:59 (PrRR3)	07:09	06:47	05:30
	15:46	16:43	16:08 (PrRR3)	17:45	19:51	20:53
2	08:48	08:10	15:58 (PrRR3)	07:06	06:44	05:28
	15:47	16:45	16:11 (PrRR3)	17:48	19:53	20:55
3	08:48	08:09	15:58 (PrRR3)	07:03	06:41	05:26
	15:49	16:48	16:14 (PrRR3)	17:50	19:55	20:57
4	08:47	08:07	15:57 (PrRR3)	07:01	06:39	05:24
	15:50	16:50	16:15 (PrRR3)	17:52	19:57	20:59
5	08:47	08:04	15:57 (PrRR3)	06:58	06:36	05:21
	15:51	16:52	16:16 (PrRR3)	17:54	19:59	21:01
6	08:46	08:02	15:57 (PrRR3)	06:56	06:33	05:19
	15:53	16:54	16:17 (PrRR3)	17:56	20:01	21:03
7	08:46	08:00	15:58 (PrRR3)	06:53	06:31	05:17
	15:54	16:57	16:17 (PrRR3)	17:58	20:03	21:05
8	08:45	07:58	15:57 (PrRR3)	06:50	06:28	05:15
	15:56	16:59	16:16 (PrRR3)	18:00	20:05	21:07
9	08:44	07:56	15:58 (PrRR3)	06:48	06:25	05:13
	15:57	17:01	16:16 (PrRR3)	18:03	20:07	21:09
10	08:44	07:54	15:59 (PrRR3)	06:45	06:23	05:11
	15:59	17:03	16:16 (PrRR3)	18:05	20:09	21:11
11	08:43	07:52	16:00 (PrRR3)	06:43	06:20	05:09
	16:01	17:06	16:14 (PrRR3)	18:07	20:12	21:13
12	08:42	07:49	16:02 (PrRR3)	06:40	06:18	05:06
	16:03	17:08	16:13 (PrRR3)	18:09	20:14	21:15
13	08:41	07:47	16:04 (PrRR3)	06:37	06:15	05:04
	16:04	17:10	16:10 (PrRR3)	18:11	20:16	21:17
14	08:40	07:45		06:35	06:12	05:02
	16:06	17:12		18:13	20:18	21:19
15	08:39	07:43		06:32	06:10	05:01
	16:08	17:15		18:15	20:20	21:21
16	08:38	07:40		06:29	06:07	04:59
	16:10	17:17		18:17	20:22	21:23
17	08:36	07:38		06:27	06:05	04:57
	16:12	17:19		18:20	20:24	21:25
18	08:35	07:36		06:24	06:02	04:55
	16:14	17:21		18:22	20:26	21:27
19	08:34	07:33		06:21	06:00	04:53
	16:16	17:23		18:24	20:28	21:29
20	08:32	07:31		06:19	05:57	04:51
	16:18	17:26		18:26	20:30	21:31
21	08:31	07:28		06:16	05:55	04:50
	16:20	17:28		18:28	20:32	21:32
22	08:30	07:26		06:13	05:52	04:48
	16:22	17:30		18:30	20:34	21:34
23	08:28	07:24		06:11	05:50	04:46
	16:24	17:32		18:32	20:37	21:36
24	08:26	07:21		06:08	05:47	04:45
	16:26	17:34		18:34	20:39	21:38
25	08:25	07:19		06:05	05:45	04:43
	16:28	17:37		18:36	20:41	21:39
26	08:23	07:16		06:03	05:42	04:42
	16:30	17:39		18:38	20:43	21:41
27	08:21	07:14		06:00	05:40	04:40
	16:32	17:41		18:40	20:45	21:43
28	08:20	07:11		05:57	05:38	04:39
	16:34	17:43		18:42	20:47	21:44
29	08:18			06:55	05:35	04:38
	16:37			19:45	20:49	21:46
30	08:16	16:01 (PrRR3)		06:52	05:33	04:36
	16:39	16:03 (PrRR3)		19:47	20:51	21:47
31	08:14	16:00 (PrRR3)		06:49		04:35
	16:41	16:06 (PrRR3)		19:49		21:49
Potential sun hours	235	266	366	426	507	528
Total, worst case	8	199				
Sun reduction	0,13	0,23				
Oper. time red.	1,00	1,00				
Wind dir. red.	1,00	1,00				
Total reduction	0,13	0,23				
Total, real	1	45				

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Lielo Orišu 2 maju zeme - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (482)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	July	August	September	October	November	December
1	04:28	05:14	06:15	07:15	07:20	15:29 (PrRR3) 08:22
	22:07	21:25	20:12	18:51	16:34	16 15:45 (PrRR3) 15:43
2	04:29	05:16	06:17	07:17	07:22	15:28 (PrRR3) 08:23
	22:06	21:23	20:09	18:49	16:32	18 15:46 (PrRR3) 15:42
3	04:30	05:17	06:19	07:19	07:25	15:27 (PrRR3) 08:25
	22:06	21:21	20:06	18:46	16:29	19 15:46 (PrRR3) 15:41
4	04:31	05:19	06:21	07:21	07:27	15:27 (PrRR3) 08:27
	22:05	21:19	20:04	18:43	16:27	20 15:47 (PrRR3) 15:40
5	04:32	05:21	06:23	07:23	07:29	15:27 (PrRR3) 08:28
	22:04	21:17	20:01	18:41	16:25	19 15:46 (PrRR3) 15:40
6	04:33	05:23	06:25	07:25	07:31	15:28 (PrRR3) 08:30
	22:04	21:15	19:59	18:38	16:23	19 15:47 (PrRR3) 15:39
7	04:34	05:25	06:27	07:27	07:33	15:28 (PrRR3) 08:31
	22:03	21:13	19:56	18:36	16:21	18 15:46 (PrRR3) 15:38
8	04:35	05:27	06:29	07:29	07:35	15:28 (PrRR3) 08:33
	22:02	21:11	19:53	18:33	16:19	15 15:43 (PrRR3) 15:38
9	04:36	05:29	06:31	07:31	07:38	15:29 (PrRR3) 08:34
	22:01	21:08	19:51	18:30	16:17	13 15:42 (PrRR3) 15:37
10	04:37	05:31	06:33	07:33	07:40	15:30 (PrRR3) 08:36
	22:00	21:06	19:48	18:28	16:15	9 15:39 (PrRR3) 15:37
11	04:39	05:33	06:35	07:36	07:42	15:31 (PrRR3) 08:37
	21:59	21:04	19:45	18:25	16:13	7 15:38 (PrRR3) 15:37
12	04:40	05:35	06:37	07:38	07:44	15:33 (PrRR3) 08:38
	21:58	21:02	19:43	18:23	16:11	2 15:35 (PrRR3) 15:36
13	04:41	05:37	06:39	07:40	07:46	08:39
	21:57	20:59	19:40	18:20	16:09	15:36
14	04:43	05:39	06:41	07:42	07:48	08:40
	21:55	20:57	19:37	18:17	16:07	15:36
15	04:44	05:41	06:43	07:44	07:50	08:41
	21:54	20:54	19:34	18:15	16:06	15:36
16	04:46	05:43	06:45	07:46	07:53	08:42
	21:53	20:52	19:32	18:12	16:04	15:36
17	04:47	05:45	06:47	07:48	07:55	08:43
	21:51	20:50	19:29	18:10	16:02	15:36
18	04:49	05:47	06:49	07:50	07:57	08:44
	21:50	20:47	19:26	18:07	16:00	15:36
19	04:50	05:49	06:51	07:52	07:59	08:45
	21:49	20:45	19:24	18:05	15:59	15:36
20	04:52	05:51	06:53	07:54	08:01	08:45
	21:47	20:42	19:21	18:02	15:57	15:37
21	04:54	05:53	06:55	07:57	08:03	08:46
	21:45	20:40	19:18	18:00	15:56	15:37
22	04:55	05:55	06:57	07:59	08:05	08:47
	21:44	20:37	19:16	17:57	15:54	15:37
23	04:57	05:57	06:59	08:01	08:07	08:47
	21:42	20:35	19:13	17:55	15:53	15:38
24	04:59	05:59	07:01	08:03	08:09	08:48
	21:41	20:32	19:10	17:53	15:51	15:39
25	05:01	06:01	07:03	07:05	08:11	08:48
	21:39	20:30	19:08	16:50	15:50	15:39
26	05:02	06:03	07:05	07:07	08:13	08:48
	21:37	20:27	19:05	16:48	15:49	15:40
27	05:04	06:05	07:07	07:09	08:15	08:48
	21:35	20:25	19:02	16:45	15:47	15:41
28	05:06	06:07	07:09	07:12	08:16	08:49
	21:33	20:22	18:59	16:43	15:46	15:42
29	05:08	06:09	07:11	07:14	15:33 (PrRR3) 08:18	08:49
	21:31	20:20	18:57	16:41	7 15:40 (PrRR3) 15:45	15:43
30	05:10	06:11	07:13	07:16	15:31 (PrRR3) 08:20	08:49
	21:29	20:17	18:54	16:38	12 15:43 (PrRR3) 15:44	15:44
31	05:12	06:13		07:18	15:29 (PrRR3)	08:48
	21:27	20:14		16:36	15 15:44 (PrRR3)	15:45
Potential sun hours	529	469	384	324	248	217
Total, worst case				34	175	
Sun reduction				0,29	0,08	
Oper. time red.				1,00	1,00	
Wind dir. red.				1,00	1,00	
Total reduction				0,29	0,08	
Total, real				10	13	

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Linu Diki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (461)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:49	09:44 (PrRR3)	08:13	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
15:46	21	10:05 (PrRR3)	16:43	17:46	19:51	20:53	21:50	22:07	21:26	20:12	18:52	16:34	15:43
2	08:48	09:44 (PrRR3)	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:23	08:24
15:48	21	10:05 (PrRR3)	16:46	17:48	19:53	20:55	21:52	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	09:45 (PrRR3)	08:09	07:04	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
15:49	21	10:06 (PrRR3)	16:48	17:50	19:55	20:57	21:53	22:06	21:22	20:07	18:46	16:30	15:41
4	08:48	09:46 (PrRR3)	08:07	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
15:50	20	10:06 (PrRR3)	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:27	15:41
5	08:47	09:46 (PrRR3)	08:05	06:58	06:36	05:22	04:30	04:32	05:21	06:23	07:23	07:29	08:29
15:52	20	10:06 (PrRR3)	16:52	17:54	19:59	21:01	21:56	22:04	21:17	20:01	18:41	16:25	15:40
6	08:47	09:47 (PrRR3)	08:03	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
15:53	20	10:07 (PrRR3)	16:54	17:56	20:01	21:04	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	09:48 (PrRR3)	08:01	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:32
15:54	19	10:07 (PrRR3)	16:57	17:59	20:03	21:06	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	09:48 (PrRR3)	07:58	06:51	06:28	05:15	04:27	04:35	05:27	06:29	07:30	07:36	08:33
15:56	19	10:07 (PrRR3)	16:59	18:01	20:05	21:08	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:45	09:49 (PrRR3)	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:32	07:38	08:34
15:58	18	10:07 (PrRR3)	17:01	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:30	16:17	15:37
10	08:44	09:50 (PrRR3)	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:34	07:40	08:36
15:59	17	10:07 (PrRR3)	17:03	18:05	20:10	21:12	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	09:50 (PrRR3)	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
16:01	16	10:06 (PrRR3)	17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	09:51 (PrRR3)	07:50	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
16:03	15	10:06 (PrRR3)	17:08	18:09	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	09:53 (PrRR3)	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
16:04	13	10:06 (PrRR3)	17:10	18:11	20:16	21:18	22:04	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	09:54 (PrRR3)	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:49	08:40
16:06	12	10:06 (PrRR3)	17:12	18:13	20:18	21:19	22:04	21:56	20:57	19:37	18:18	16:08	15:36
15	08:39	09:55 (PrRR3)	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:51	08:41
16:08	9	10:04 (PrRR3)	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:36
16	08:38	09:59 (PrRR3)	07:41	06:30	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:53	08:42
16:10	3	10:02 (PrRR3)	17:17	18:18	20:22	21:23	22:06	21:53	20:52	19:32	18:12	16:04	15:36
17	08:37		07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
16:12			17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:35		07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
16:14			17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:27	18:07	16:01	15:36
19	08:34		07:33	06:22	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
16:16			17:24	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33		07:31	06:19	05:57	04:52	04:23	04:52	05:51	06:53	07:55	08:01	08:46
16:18			17:26	18:26	20:30	21:31	22:07	21:47	20:43	19:21	18:02	15:57	15:37
21	08:31		07:29	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:46
16:20			17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:18	18:00	15:56	15:37
22	08:30		07:26	06:14	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
16:22			17:30	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:58	15:54	15:38
23	08:28		07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
16:24			17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:27		07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
16:26			17:35	18:34	20:39	21:38	22:08	21:41	20:33	19:10	17:53	15:51	15:39
25	08:25		07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	07:05	08:11	08:48
16:28			17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23		07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	07:07	08:13	08:48
16:30			17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:22		07:14	06:00	05:40	04:40	04:26	05:04	06:05	07:07	07:10	08:15	08:49
16:32			17:41	18:41	20:45	21:43	22:08	21:35	20:25	19:02	16:46	15:48	15:41
28	08:20		07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	07:12	08:17	08:49
16:35			17:43	18:43	20:47	21:44	22:08	21:33	20:22	19:00	16:43	15:46	15:42
29	08:18			06:55	05:35	04:38	04:27	05:08	06:09	07:11	07:14	08:18	08:49
16:37				19:45	20:49	21:46	22:07	21:32	20:20	18:57	16:41	15:45	15:40
30	08:16			06:52	05:33	04:36	04:27	05:10	06:11	07:13	07:16	08:20	08:49
16:39				19:47	20:51	21:47	22:07	21:30	20:17	18:54	16:39	15:44	15:44
31	08:14			06:49	04:35			05:12	06:13		07:18		08:49
16:41				19:49	21:49			21:28	20:15		16:36		15:45
Potential sun hours	235		266	366	426	508	528	529	469	384	324	248	216
Total, worst case		264										51	620
Sun reduction		0,13										0,08	0,08
Oper. time red.		1,00										1,00	1,00
Wind dir. red.		1,00										1,00	1,00
Total reduction		0,13										0,08	0,08
Total, real		35										4	52

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Ludvigova - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (447)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:13	07:09	06:47	05:32	04:35	04:30	05:15	06:16	07:16	07:21	08:22
	15:48	16:44	17:46	19:51	20:53	21:50	22:06	21:26	20:12	18:52	16:35	15:44
2	08:48	08:11	07:07	06:45	05:29	04:34	04:30	05:17	06:18	07:18	07:23	08:24
	15:49	16:47	17:48	19:53	20:55	21:52	22:06	21:24	20:10	18:50	16:33	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:19	06:20	07:20	07:25	08:25
	15:50	16:49	17:51	19:55	20:57	21:53	22:05	21:22	20:07	18:47	16:31	15:43
4	08:47	08:07	07:01	06:39	05:25	04:32	04:32	05:21	06:22	07:22	07:27	08:27
	15:51	16:51	17:53	19:58	21:00	21:54	22:05	21:20	20:04	18:44	16:28	15:42
5	08:47	08:05	06:59	06:37	05:23	04:31	04:33	05:23	06:24	07:24	07:29	08:28
	15:53	16:53	17:55	20:00	21:02	21:55	22:04	21:17	20:02	18:42	16:26	15:41
6	08:46	08:03	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:02	21:04	21:57	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:01	06:54	06:32	05:18	04:29	04:35	05:26	06:28	07:28	07:34	08:31
	15:56	16:58	17:59	20:04	21:06	21:58	22:03	21:13	19:56	18:36	16:22	15:40
8	08:45	07:59	06:51	06:29	05:16	04:29	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	17:00	18:01	20:06	21:08	21:59	22:02	21:11	19:54	18:34	16:20	15:39
9	08:44	07:56	06:48	06:26	05:14	04:28	04:38	05:30	06:32	07:32	07:38	08:34
	15:59	17:02	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:31	16:18	15:39
10	08:44	07:54	06:46	06:24	05:12	04:27	04:39	05:32	06:34	07:34	07:40	08:36
	16:00	17:04	18:06	20:10	21:12	22:01	22:00	21:06	19:48	18:29	16:16	15:38
11	08:43	07:52	06:43	06:21	05:10	04:27	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:07	18:08	20:12	21:14	22:02	21:59	21:04	19:46	18:26	16:14	15:38
12	08:42	07:50	06:41	06:19	05:08	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:04	17:09	18:10	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:12	15:38
13	08:41	07:48	06:38	06:16	05:06	04:26	04:43	05:38	06:40	07:40	07:46	08:39
	16:06	17:11	18:12	20:16	21:17	22:03	21:57	21:00	19:40	18:21	16:10	15:37
14	08:40	07:45	06:35	06:13	05:04	04:26	04:44	05:40	06:42	07:42	07:49	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:38	18:18	16:09	15:37
15	08:39	07:43	06:33	06:11	05:02	04:25	04:46	05:42	06:44	07:44	07:51	08:41
	16:09	17:16	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:16	16:07	15:37
16	08:38	07:41	06:30	06:08	05:00	04:25	04:47	05:44	06:46	07:46	07:53	08:42
	16:11	17:18	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:05	15:37
17	08:37	07:38	06:27	06:06	04:58	04:25	04:49	05:46	06:48	07:49	07:55	08:43
	16:13	17:20	18:20	20:24	21:25	22:06	21:52	20:50	19:30	18:11	16:03	15:37
18	08:35	07:36	06:25	06:03	04:56	04:25	04:50	05:48	06:50	07:51	07:57	08:44
	16:15	17:22	18:22	20:27	21:27	22:06	21:50	20:48	19:27	18:08	16:02	15:38
19	08:34	07:34	06:22	06:01	04:54	04:25	04:52	05:50	06:52	07:53	07:59	08:45
	16:17	17:24	18:24	20:29	21:29	22:07	21:49	20:45	19:24	18:06	16:00	15:38
20	08:33	07:31	06:19	05:58	04:53	04:25	04:53	05:52	06:54	07:55	08:01	08:45
	16:19	17:27	18:27	20:31	21:31	22:07	21:47	20:43	19:22	18:03	15:58	15:38
21	08:31	07:29	06:17	05:56	04:51	04:25	04:55	05:54	06:56	07:57	08:03	08:46
	16:21	17:29	18:29	20:33	21:32	22:07	21:46	20:40	19:19	18:01	15:57	15:38
22	08:30	07:26	06:14	05:53	04:49	04:25	04:57	05:56	06:58	07:59	08:05	08:47
	16:23	17:31	18:31	20:35	21:34	22:08	21:44	20:38	19:16	17:58	15:55	15:39
23	08:28	07:24	06:11	05:51	04:48	04:25	04:59	05:58	07:00	08:01	08:07	08:47
	16:25	17:33	18:33	20:37	21:36	22:08	21:42	20:35	19:14	17:56	15:54	15:39
24	08:27	07:22	06:09	05:48	04:46	04:26	05:00	06:00	07:02	08:03	08:09	08:48
	16:27	17:35	18:35	20:39	21:38	22:08	21:41	20:33	19:11	17:53	15:53	15:40
25	08:25	07:19	06:06	05:46	04:45	04:26	05:02	06:02	07:04	08:06	08:11	08:48
	16:29	17:38	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:41
26	08:23	07:17	06:03	05:43	04:43	04:26	05:04	06:04	07:06	08:08	08:13	08:48
	16:31	17:40	18:39	20:43	21:41	22:08	21:37	20:28	19:06	17:49	15:50	15:41
27	08:22	07:14	06:01	05:41	04:42	04:27	05:06	06:06	07:08	08:10	08:15	08:48
	16:33	17:42	18:41	20:45	21:43	22:08	21:35	20:25	19:03	17:46	15:49	15:42
28	08:20	07:12	05:58	05:39	04:40	04:27	05:07	06:08	07:10	08:12	08:17	08:49
	16:36	17:44	18:43	20:47	21:44	22:07	21:33	20:23	19:00	17:44	15:48	15:43
29	08:18		06:55	05:36	04:39	04:28	05:09	06:10	07:12	08:14	08:18	08:49
	16:38		19:45	20:49	21:46	22:07	21:32	20:20	18:58	17:42	15:46	15:44
30	08:16		06:53	05:34	04:38	04:29	05:11	06:12	07:14	08:16	08:20	08:49
	16:40		19:47	20:51	21:47	22:07	21:30	20:17	18:55	17:39	15:45	15:45
31	08:15		06:50		04:36		05:13	06:14		07:18		08:48
	16:42		19:49		21:49		21:28	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Lidumi (kad. apz. 76740020172001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (550)  
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:46	08:12 16:43		07:09 17:45	06:47 19:51	05:30 20:53	04:34 21:50	04:28 22:07	05:14 21:25	06:15 20:12	07:15 18:51	07:20 16:34
2	08:48 15:47	08:10 16:45		07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:52	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32
3	08:48 15:49	08:09 16:48		07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:06	05:17 21:21	06:19 20:06	07:19 18:46	07:25 16:30
4	08:47 15:50	08:07 16:50		07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	07:21 18:43	07:27 16:27
5	08:47 15:51	08:04 16:52		06:58 17:54	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	07:23 18:41	07:29 16:25
6	08:46 15:53	08:02 16:54		06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:57	04:33 22:04	05:23 21:15	06:25 19:59	07:25 18:38	07:31 16:23
7	08:46 15:54	08:00 16:57		06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	07:33 16:21
8	08:45 15:56	07:58 16:59		06:50 18:00	06:28 20:05	05:15 21:07	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	07:35 16:19
9	08:44 15:57	07:56 17:01		06:48 18:03	06:25 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51	07:31 18:30	07:38 16:17
10	08:44 15:59	07:54 17:03		06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:31 21:06	06:33 19:48	07:33 18:28	07:40 16:15
11	08:43 16:01	07:52 17:06	16:30 (PrRR3)	06:43 18:07	06:20 20:12	05:09 21:13	04:25 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13
12	08:42 16:02	07:49 17:08	16:28 (PrRR3)	06:40 18:09	06:18 20:14	05:06 21:15	04:25 22:03	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	07:44 16:11
13	08:41 16:04	07:47 17:10	16:25 (PrRR3)	06:37 18:11	06:15 20:16	05:04 21:17	04:24 22:03	04:41 21:57	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09
14	08:40 16:06	07:45 17:12	16:38 (PrRR3)	06:35 18:13	06:12 20:18	05:02 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:17	07:48 16:07
15	08:39 16:08	07:43 17:15	16:41 (PrRR3)	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:44 21:54	05:41 20:54	06:43 19:34	07:44 18:15	07:50 16:06
16	08:38 16:10	07:40 17:17	16:44 (PrRR3)	06:29 18:17	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	17:02 (PrRR3)
17	08:36 16:12	07:38 17:19	16:44 (PrRR3)	06:27 18:20	06:05 20:24	04:57 21:25	04:23 22:06	04:47 21:51	05:45 20:50	06:47 19:29	07:48 18:10	17:08 (PrRR3)
18	08:35 16:14	07:36 17:21	16:45 (PrRR3)	06:24 18:22	06:02 20:26	04:55 21:27	04:23 22:06	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	17:11 (PrRR3)
19	08:34 16:16	07:33 17:23	16:46 (PrRR3)	06:21 18:24	06:00 20:28	04:53 21:29	04:23 22:07	04:51 21:49	05:49 20:45	06:51 19:24	07:52 18:05	17:12 (PrRR3)
20	08:32 16:18	07:31 17:26	16:45 (PrRR3)	06:19 18:26	05:57 20:30	04:51 21:31	04:23 22:07	04:52 21:47	05:51 20:42	06:53 19:21	07:54 18:02	17:13 (PrRR3)
21	08:31 16:20	07:28 17:28	16:44 (PrRR3)	06:16 18:28	05:55 20:32	04:50 21:32	04:23 22:08	04:54 21:45	05:53 20:40	06:55 19:18	07:57 18:00	17:14 (PrRR3)
22	08:30 16:22	07:26 17:30	16:43 (PrRR3)	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 19:16	07:59 17:57	17:15 (PrRR3)
23	08:28 16:24	07:24 17:32	16:42 (PrRR3)	06:11 18:32	05:50 20:36	04:46 21:36	04:24 22:08	04:57 21:42	05:57 20:35	06:59 19:13	08:01 17:55	17:16 (PrRR3)
24	08:26 16:26	07:21 17:34	16:41 (PrRR3)	06:08 18:34	05:47 20:39	04:45 21:38	04:24 22:08	04:59 21:40	05:59 20:32	07:01 19:10	08:03 17:53	17:17 (PrRR3)
25	08:25 16:28	07:19 17:37	16:40 (PrRR3)	06:05 18:36	05:45 20:41	04:43 21:39	04:24 22:08	05:01 21:39	06:01 20:30	07:03 19:08	07:05 16:50	17:18 (PrRR3)
26	08:23 16:30	07:16 17:39	16:38 (PrRR3)	06:03 18:38	05:42 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 19:05	07:07 16:48	17:19 (PrRR3)
27	08:21 16:32	07:14 17:41		06:00 18:40	05:40 20:45	04:40 21:43	04:25 22:08	05:04 21:35	06:05 20:25	07:07 19:02	07:09 16:45	17:20 (PrRR3)
28	08:20 16:34	07:11 17:43		05:57 18:42	05:38 20:47	04:39 21:44	04:26 22:08	05:06 21:33	06:07 20:22	07:09 18:59	07:12 16:43	17:21 (PrRR3)
29	08:18 16:37			06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 18:57	07:14 16:41	17:22 (PrRR3)
30	08:16 16:39			06:52 19:47	05:33 20:51	04:36 21:47	04:27 22:07	05:10 21:29	06:11 20:17	07:13 18:54	07:16 16:38	17:23 (PrRR3)
31	08:14 16:41			06:49 19:49	05:35 21:49	04:35 21:49	05:12 21:27	06:13 20:14	06:13 20:14	07:18 16:36	07:18 16:36	17:24 (PrRR3)
Potential sun hours	236	266		366	426	507	528	529	469	384	324	248
Total, worst case		252									254	217
Sun reduction		0,23									0,29	
Oper. time red.		1,00									1,00	
Wind dir. red.		1,00									1,00	
Total reduction		0,23									0,29	
Total, real		57									74	

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Lidumi (kad. apz. 76740020238001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (557)  
 Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Lidums - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (491)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:15	06:17	07:17	07:22	08:23
	15:47	16:45	17:47	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:56	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:05	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:05	15:36
16	08:37	07:40	06:29	06:07	04:59	04:23	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:23	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Lipenas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (500)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:07	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:15	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:52	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:02	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:38	07:40	06:29	06:07	04:59	04:23	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:31	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:08	21:45	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:13	05:52	04:48	04:23	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:34	18:34	20:39	21:38	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:15	08:48
	16:32	17:41	18:40	20:45	21:43	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:08	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Madaras - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (519)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Magones - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (552)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:15	06:17	07:17	07:22	08:23
	15:47	16:45	17:47	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:56	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:05	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:05	15:36
16	08:37	07:40	06:29	06:07	04:59	04:23	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:23	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Maksimova - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (466)  
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:49 15:46 28	14:16 (06) 14:44 (06) 16:43	08:13 17:46 19:51	07:09 17:46 20:53	06:47 17:46 21:50	05:31 20:53 21:50	04:34 22:07 21:26	04:28 21:26 20:12	05:14 20:12 18:52	06:15 18:52 16:34	07:15 16:34 15:43	08:22 15:43 14:31 (06)
2	08:48 15:48 28	14:16 (06) 14:44 (06) 16:46	08:11 17:48 20:55	07:06 17:48 21:52	06:44 17:48 21:53	05:28 20:55 21:52	04:33 22:06 21:24	04:29 21:24 20:09	05:16 20:09 18:49	06:17 18:49 16:32	07:17 16:32 15:42	08:24 15:42 14:31 (06)
3	08:48 15:49 28	14:17 (06) 14:45 (06) 16:48	08:09 17:50 20:57	07:04 17:50 21:53	06:42 17:50 21:53	05:26 20:57 21:53	04:32 22:06 21:22	04:30 21:22 20:07	05:18 20:07 18:46	06:19 18:46 16:30	07:19 16:30 15:41	08:25 15:41 14:31 (06)
4	08:48 15:50 29	14:16 (06) 14:45 (06) 16:50	08:07 17:52 21:00	07:01 17:52 21:00	06:39 17:52 21:00	05:24 21:00 21:54	04:31 21:54 22:05	04:31 22:05 21:20	05:20 21:20 20:04	06:21 20:04 18:44	07:21 18:44 16:28	08:27 16:28 15:41
5	08:47 15:52 29	14:16 (06) 14:45 (06) 16:52	08:05 17:54 21:02	06:59 17:54 21:02	06:36 17:54 21:02	05:22 21:02 21:56	04:30 21:56 22:05	04:32 22:05 21:17	05:22 21:17 20:01	06:23 20:01 18:41	07:23 18:41 16:25	08:29 16:25 15:40
6	08:47 15:53 29	14:18 (06) 14:47 (06) 16:55	08:03 17:56 21:04	06:56 17:56 21:04	06:34 17:56 21:04	05:19 21:04 21:57	04:29 21:57 22:04	04:33 22:04 21:15	05:24 21:15 19:59	06:25 19:59 18:38	07:25 18:38 16:23	08:30 16:23 15:39
7	08:46 15:55 29	14:18 (06) 14:47 (06) 16:57	08:01 17:59 21:03	06:53 17:59 21:03	06:31 17:59 21:03	05:17 21:03 21:58	04:28 21:58 22:03	04:34 22:03 21:13	05:25 21:13 19:56	06:27 19:56 18:36	07:28 18:36 16:21	08:32 16:21 15:39
8	08:45 15:56 30	14:18 (06) 14:48 (06) 16:59	07:58 18:01 21:06	06:51 18:01 21:06	06:28 18:01 21:06	05:15 21:06 21:59	04:28 21:59 22:02	04:35 22:02 21:11	05:27 21:11 19:53	06:29 19:53 18:33	07:30 18:33 16:19	08:33 16:19 15:38
9	08:45 15:58 30	14:18 (06) 14:48 (06) 17:01	07:56 18:03 21:08	06:48 18:03 21:08	06:26 18:03 21:08	05:13 21:08 22:00	04:27 22:00 22:01	04:36 22:01 21:09	05:29 21:09 19:51	06:31 19:51 18:31	07:32 18:31 16:17	08:34 16:17 15:38
10	08:44 15:59 30	14:19 (06) 14:49 (06) 17:04	07:54 18:05 21:10	06:45 18:05 21:10	06:23 18:05 21:10	05:11 21:10 22:01	04:26 22:01 22:00	04:38 22:00 21:06	05:31 21:06 19:48	06:33 19:48 18:28	07:34 18:28 16:15	08:36 16:15 15:37
11	08:43 16:01 30	14:19 (06) 14:49 (06) 17:06	07:52 18:07 21:12	06:43 18:07 21:12	06:20 18:07 21:12	05:09 21:12 22:02	04:26 22:02 21:59	04:39 21:59 21:04	05:33 21:04 19:45	06:35 19:45 18:25	07:36 18:25 16:13	08:37 16:13 15:37
12	08:42 16:03 30	14:19 (06) 14:49 (06) 17:08	07:50 18:09 21:14	06:40 18:09 21:14	06:18 18:09 21:14	05:07 21:14 22:03	04:25 22:03 21:58	04:40 21:58 21:02	05:35 21:02 19:43	06:37 19:43 18:23	07:38 18:23 16:11	08:38 16:11 15:36
13	08:41 16:05 31	14:19 (06) 14:50 (06) 17:10	07:47 18:11 21:16	06:38 18:11 21:16	06:15 18:11 21:16	05:05 21:16 22:04	04:25 22:04 21:57	05:37 21:57 20:59	06:39 20:59 19:40	07:40 19:40 18:20	07:46 18:20 16:09	08:39 16:09 15:36
14	08:40 16:06 30	14:20 (06) 14:50 (06) 17:13	07:45 18:13 21:18	06:35 18:13 21:18	06:13 18:13 21:18	05:03 21:18 22:04	04:24 22:04 21:56	05:39 21:56 20:57	06:41 20:57 19:37	07:42 19:37 18:18	07:49 18:18 16:08	08:40 16:08 15:36
15	08:39 16:08 30	14:20 (06) 14:50 (06) 17:15	07:43 18:16 21:20	06:32 18:16 21:20	06:10 18:16 21:20	05:01 21:20 22:05	04:24 22:05 21:54	05:41 21:54 20:55	06:43 20:55 19:35	07:44 19:35 18:15	07:51 18:15 16:06	08:42 16:06 15:36
16	08:38 16:10 30	14:21 (06) 14:51 (06) 17:17	07:41 18:18 21:22	06:30 18:18 21:22	06:08 18:18 21:22	04:59 21:22 22:06	04:24 22:06 21:53	05:43 21:53 20:52	06:45 20:52 19:32	07:46 19:32 18:13	07:53 18:13 16:04	08:42 16:04 15:36
17	08:37 16:12 30	14:21 (06) 14:51 (06) 17:19	07:38 18:20 21:24	06:27 18:20 21:24	06:05 18:20 21:24	04:57 21:24 22:06	04:24 22:06 21:52	05:45 21:52 20:50	06:47 20:50 19:29	07:48 19:29 18:10	07:55 18:10 16:02	08:43 16:02 15:36
18	08:35 16:14 29	14:22 (06) 14:51 (06) 17:21	07:36 18:22 21:26	06:24 18:22 21:26	06:02 18:22 21:26	04:55 21:26 22:07	04:23 22:07 21:50	05:47 21:50 20:47	06:49 20:47 19:27	07:50 19:27 18:07	07:57 18:07 16:01	08:44 16:01 15:36
19	08:34 16:16 29	14:22 (06) 14:51 (06) 17:24	07:33 18:24 21:28	06:22 18:24 21:28	06:00 18:24 21:28	04:53 21:28 22:07	04:23 22:07 21:49	05:49 21:49 20:45	06:51 20:45 19:24	07:53 19:24 18:05	07:59 18:05 15:59	08:45 15:59 15:37
20	08:33 16:18 29	14:23 (06) 14:52 (06) 17:26	07:31 18:26 21:31	06:19 18:26 21:31	05:57 18:26 21:31	04:52 21:31 22:08	04:23 22:08 21:47	05:51 21:47 20:43	06:53 20:43 19:21	07:55 19:21 18:03	08:01 18:03 15:57	08:46 15:57 15:37
21	08:31 16:20 27	14:24 (06) 14:51 (06) 17:28	07:29 18:28 21:33	06:16 18:28 21:33	05:55 18:28 21:33	04:50 21:33 22:08	04:24 22:08 21:46	05:53 21:46 20:40	06:55 20:40 19:19	07:57 19:19 18:00	08:03 18:00 15:56	08:46 15:56 15:37
22	08:30 16:22 27	14:24 (06) 14:51 (06) 17:30	07:26 18:30 21:34	06:14 18:30 21:34	05:52 18:30 21:34	04:48 21:34 22:08	04:24 22:08 21:44	05:55 21:44 20:38	06:57 20:38 19:16	07:59 19:16 17:58	08:05 17:58 15:54	08:47 15:54 15:38
23	08:28 16:24 25	14:25 (06) 14:50 (06) 17:33	07:24 18:32 21:36	06:11 18:32 21:36	05:50 18:32 21:36	04:47 21:36 22:08	04:24 22:08 21:42	05:57 21:42 20:35	06:59 20:35 19:13	08:01 19:13 17:55	08:07 17:55 15:53	08:47 15:53 15:38
24	08:27 16:26 24	14:26 (06) 14:50 (06) 17:35	07:21 18:34 21:39	06:08 18:34 21:39	05:47 18:34 21:39	04:45 21:39 22:08	04:24 22:08 21:41	05:59 21:41 20:33	07:01 20:33 19:10	08:03 19:10 17:53	08:09 17:53 15:52	08:48 15:52 15:39
25	08:25 16:28 22	14:28 (06) 14:50 (06) 17:37	07:19 18:36 21:41	06:06 18:36 21:41	05:45 18:36 21:41	04:43 21:41 22:08	04:25 22:08 21:39	06:01 21:39 20:30	07:03 20:30 19:08	07:05 19:08 16:50	08:11 16:50 15:50	08:48 15:50 15:39
26	08:23 16:30 19	14:30 (06) 14:49 (06) 17:39	07:16 18:39 21:43	06:03 18:39 21:43	05:43 18:39 21:43	04:42 21:43 22:08	04:25 22:08 21:37	06:03 21:37 20:28	07:05 20:28 19:05	07:08 19:05 16:48	08:13 16:48 15:49	08:48 15:49 15:40
27	08:22 16:32 16	14:31 (06) 14:47 (06) 17:41	07:14 18:41 21:45	06:00 18:41 21:45	05:40 18:41 21:45	04:41 21:45 22:08	04:26 22:08 21:35	06:05 21:35 20:25	07:07 20:25 19:02	07:10 19:02 16:46	08:15 16:46 15:48	08:49 15:48 15:41
28	08:20 16:35 11	14:34 (06) 14:45 (06) 17:43	07:11 18:43 21:47	05:58 18:43 21:47	05:38 18:43 21:47	04:39 21:47 22:08	04:26 22:08 21:34	06:06 21:34 20:22	07:09 20:22 19:00	07:12 19:00 16:43	08:17 16:43 15:46	08:49 15:46 15:42
29	08:18 16:37 30	14:34 (06) 14:45 (06) 17:43	07:11 18:43 21:47	05:58 18:43 21:47	05:38 18:43 21:47	04:39 21:47 22:08	04:26 22:08 21:34	06:06 21:34 20:22	07:09 20:22 19:00	07:12 19:00 16:43	08:17 16:43 15:46	08:49 15:46 15:42
30	08:16 16:39 31	14:34 (06) 14:45 (06) 17:43	07:11 18:43 21:47	05:58 18:43 21:47	05:38 18:43 21:47	04:39 21:47 22:08	04:26 22:08 21:34	06:06 21:34 20:22	07:09 20:22 19:00	07:12 19:00 16:43	08:17 16:43 15:46	08:49 15:46 15:42
31	08:15 16:41	14:34 (06) 14:45 (06) 17:43	07:11 18:43 21:47	05:58 18:43 21:47	05:38 18:43 21:47	04:39 21:47 22:08	04:26 22:08 21:34	06:06 21:34 20:22	07:09 20:22 19:00	07:12 19:00 16:43	08:17 16:43 15:46	08:49 15:46 15:42
Potential sun hours	235	266	366	426	507	528	529	469	384	324	248	216
Total, worst case	759									440		843
Sun reduction	0,13									0,08		0,08
Oper. time red.	1,00									1,00		1,00
Wind dir. red.	1,00									1,00		1,00
Total reduction	0,13									0,08		0,08
Total, real	102									33		71

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Malova - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (472)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January		February		March		April	May	June
1	08:48	13:10 (JU1)	08:13	09:33 (Pr3a)	07:09	07:53 (PrRR3)	06:47	05:31	04:34
	15:46	20 13:30 (JU1)	16:43	25 09:58 (Pr3a)	17:46	61 09:20 (Pr25)	19:51	20:53	21:50
2	08:48	13:11 (JU1)	08:11	09:35 (Pr3a)	07:06	07:53 (PrRR3)	06:44	05:28	04:33
	15:48	19 13:30 (JU1)	16:46	22 09:57 (Pr3a)	17:48	57 09:18 (Pr25)	19:53	20:55	21:52
3	08:48	13:12 (JU1)	08:09	09:36 (Pr3a)	07:04	07:54 (PrRR3)	06:41	05:26	04:32
	15:49	18 13:30 (JU1)	16:48	20 09:56 (Pr3a)	17:50	52 09:16 (Pr25)	19:55	20:57	21:53
4	08:48	13:13 (JU1)	08:07	09:38 (Pr3a)	07:01	07:54 (PrRR3)	06:39	05:24	04:31
	15:50	17 13:30 (JU1)	16:50	17 09:55 (Pr3a)	17:52	47 09:14 (Pr25)	19:57	20:59	21:54
5	08:47	09:34 (Pr3a)	08:05	08:59 (Pr25)	06:58	07:54 (PrRR3)	06:36	05:22	04:30
	15:52	20 13:29 (JU1)	16:52	19 09:51 (Pr3a)	17:54	39 09:10 (Pr25)	19:59	21:01	21:56
6	08:47	09:34 (Pr3a)	08:03	08:55 (Pr25)	06:56	07:56 (PrRR3)	06:34	05:19	04:29
	15:53	23 13:30 (JU1)	16:55	22 16:21 (Pr12)	17:56	27 09:06 (Pr25)	20:01	21:04	21:57
7	08:46	09:32 (Pr3a)	08:01	08:53 (Pr25)	06:53	07:58 (PrRR3)	06:31	05:17	04:28
	15:55	23 13:29 (JU1)	16:57	31 16:24 (Pr12)	17:59	14 08:12 (PrRR3)	20:03	21:06	21:58
8	08:45	09:32 (Pr3a)	07:58	08:52 (Pr25)	06:51	08:01 (PrRR3)	06:28	05:15	04:28
	15:56	21 13:27 (JU1)	16:59	38 16:27 (Pr12)	18:01	11 17:32 (O6)	20:05	21:08	21:59
9	08:45	09:31 (Pr3a)	07:56	08:49 (Pr25)	06:48	17:24 (O6)	06:26	05:13	04:27
	15:58	16 09:47 (Pr3a)	17:01	45 16:28 (Pr12)	18:03	11 17:35 (O6)	20:08	21:10	22:00
10	08:44	09:31 (Pr3a)	07:54	08:48 (Pr25)	06:45	17:22 (O6)	06:23	05:11	04:26
	15:59	18 09:49 (Pr3a)	17:03	51 16:31 (Pr12)	18:05	15 17:37 (O6)	20:10	21:12	22:01
11	08:43	09:29 (Pr3a)	07:52	08:47 (Pr25)	06:43	17:20 (O6)	06:20	05:09	04:26
	16:01	20 09:49 (Pr3a)	17:06	54 16:31 (Pr12)	18:07	19 17:39 (O6)	20:12	21:14	22:02
12	08:42	09:29 (Pr3a)	07:50	08:46 (Pr25)	06:40	17:20 (O6)	06:18	05:07	04:25
	16:03	21 09:50 (Pr3a)	17:08	57 16:31 (Pr12)	18:09	20 17:40 (O6)	20:14	21:16	22:03
13	08:41	09:29 (Pr3a)	07:47	08:46 (Pr25)	06:38	17:19 (O6)	06:15	05:05	04:25
	16:05	23 09:52 (Pr3a)	17:10	60 16:32 (Pr12)	18:11	21 17:40 (O6)	20:16	21:17	22:04
14	08:40	09:29 (Pr3a)	07:45	08:44 (Pr25)	06:35	17:18 (O6)	06:13	05:03	04:24
	16:06	24 09:53 (Pr3a)	17:12	65 16:33 (Pr11)	18:13	22 17:40 (O6)	20:18	21:19	22:04
15	08:39	09:28 (Pr3a)	07:43	08:44 (Pr25)	06:32	17:17 (O6)	06:10	05:01	04:24
	16:08	25 09:53 (Pr3a)	17:15	68 16:34 (Pr11)	18:16	22 17:39 (O6)	20:20	21:21	22:05
16	08:38	09:29 (Pr3a)	07:40	08:43 (Pr25)	06:30	17:18 (O6)	06:07	04:59	04:24
	16:10	26 09:55 (Pr3a)	17:17	70 16:34 (Pr11)	18:18	22 17:40 (O6)	20:22	21:23	22:06
17	08:37	09:28 (Pr3a)	07:38	08:43 (Pr25)	06:27	17:18 (O6)	06:05	04:57	04:24
	16:12	27 09:55 (Pr3a)	17:19	71 16:35 (Pr11)	18:20	21 17:39 (O6)	20:24	21:25	22:06
18	08:35	09:29 (Pr3a)	07:36	08:43 (Pr25)	06:24	17:18 (O6)	06:02	04:55	04:23
	16:14	27 09:56 (Pr3a)	17:21	71 16:34 (Pr11)	18:22	19 17:37 (O6)	20:26	21:27	22:07
19	08:34	09:28 (Pr3a)	07:33	08:43 (Pr25)	06:22	17:20 (O6)	06:00	04:53	04:23
	16:16	29 09:57 (Pr3a)	17:24	72 16:35 (Pr11)	18:24	17 17:37 (O6)	20:28	21:29	22:07
20	08:33	09:28 (Pr3a)	07:31	08:01 (PrRR3)	06:19	17:21 (O6)	05:57	04:52	04:23
	16:18	29 09:57 (Pr3a)	17:26	84 16:35 (Pr11)	18:26	13 17:34 (O6)	20:30	21:31	22:07
21	08:31	09:29 (Pr3a)	07:29	07:59 (PrRR3)	06:16	17:23 (O6)	05:55	04:50	04:24
	16:20	29 09:58 (Pr3a)	17:28	88 16:35 (Pr11)	18:28	8 17:31 (O6)	20:33	21:32	22:08
22	08:30	09:29 (Pr3a)	07:26	07:57 (PrRR3)	06:14	05:52	04:48	04:24	
	16:22	29 09:58 (Pr3a)	17:30	90 16:34 (Pr11)	18:30	20:35	21:34	22:08	
23	08:28	09:29 (Pr3a)	07:24	07:57 (PrRR3)	06:11	05:50	04:47	04:24	
	16:24	29 09:58 (Pr3a)	17:32	90 16:34 (Pr11)	18:32	20:37	21:36	22:08	
24	08:27	09:29 (Pr3a)	07:21	07:55 (PrRR3)	06:08	05:47	04:45	04:24	
	16:26	30 09:59 (Pr3a)	17:35	90 16:33 (Pr11)	18:34	20:39	21:38	22:08	
25	08:25	09:29 (Pr3a)	07:19	07:54 (PrRR3)	06:06	05:45	04:43	04:25	
	16:28	30 09:59 (Pr3a)	17:37	89 16:31 (Pr11)	18:36	20:41	21:39	22:08	
26	08:23	09:29 (Pr3a)	07:16	07:54 (PrRR3)	06:03	05:43	04:42	04:25	
	16:30	30 09:59 (Pr3a)	17:39	85 16:30 (Pr11)	18:38	20:43	21:41	22:08	
27	08:22	09:30 (Pr3a)	07:14	07:53 (PrRR3)	06:00	05:40	04:41	04:26	
	16:32	30 10:00 (Pr3a)	17:41	82 16:28 (Pr11)	18:41	20:45	21:43	22:08	
28	08:20	09:31 (Pr3a)	07:11	07:54 (PrRR3)	05:57	05:38	04:39	04:26	
	16:35	29 10:00 (Pr3a)	17:43	75 16:26 (Pr11)	18:43	20:47	21:44	22:08	
29	08:18	09:31 (Pr3a)			06:55	05:35	04:38	04:27	
	16:37	28 09:59 (Pr3a)			19:45	20:49	21:46	22:07	
30	08:16	09:31 (Pr3a)			06:52	05:33	04:37	04:28	
	16:39	27 09:58 (Pr3a)			19:47	20:51	21:47	22:07	
31	08:14	09:32 (Pr3a)			06:49		04:35		
	16:41	26 09:58 (Pr3a)			19:49		21:49		
Potential sun hours	236		266		366		426	507	528
Total, worst case	763		1651		538				
Sun reduction	0,13		0,23		0,39				
Oper. time red.	1,00		1,00		1,00				
Wind dir. red.	1,00		1,00		1,00				
Total reduction	0,13		0,23		0,39				
Total, real	102		372		211				

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Malova - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (472)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:28	05:14	06:15	07:15	17:59 (06)	07:20 08:18 (Pr25) 08:22 09:11 (Pr3a)
	22:07	21:26	20:12	18:52	21 18:20 (06) 16:34 50 16:00 (Pr12) 15:43 20 09:31 (Pr3a)	
2	04:29	05:16	06:17	07:17	17:59 (06)	07:23 08:19 (Pr25) 08:24 09:13 (Pr3a)
	22:06	21:24	20:09	18:49	19 18:18 (06) 16:32 45 15:58 (Pr12) 15:42 18 09:31 (Pr3a)	
3	04:30	05:18	06:19	07:19	17:59 (06)	07:25 08:21 (Pr25) 08:25 09:14 (Pr3a)
	22:06	21:22	20:07	18:46	17 18:16 (06) 16:30 38 15:55 (Pr12) 15:41 17 09:31 (Pr3a)	
4	04:31	05:20	06:21	07:21	18:00 (06)	07:27 08:23 (Pr25) 08:27 09:16 (Pr3a)
	22:05	21:19	20:04	18:44	13 18:13 (06) 16:28 30 15:53 (Pr12) 15:41 21 13:11 (JU1)	
5	04:32	05:22	06:23	07:23	18:02 (06)	07:29 08:26 (Pr25) 08:29 09:17 (Pr3a)
	22:04	21:17	20:01	18:41	8 18:10 (06) 16:25 22 15:50 (Pr12) 15:40 24 13:14 (JU1)	
6	04:33	05:24	06:25	07:25	08:35 (PrRR3)	07:31 08:31 (Pr25) 08:30 09:19 (Pr3a)
	22:04	21:15	19:59	18:38	11 08:46 (PrRR3)	16:23 19 09:23 (Pr3a) 15:39 23 13:15 (JU1)
7	04:34	05:25	06:27	07:27	08:32 (PrRR3)	07:33 09:08 (Pr3a) 08:32 09:21 (Pr3a)
	22:03	21:13	19:56	18:36	16 08:48 (PrRR3)	16:21 17 09:25 (Pr3a) 15:39 21 13:16 (JU1)
8	04:35	05:27	06:29	07:30	08:30 (PrRR3)	07:36 09:06 (Pr3a) 08:33 13:01 (JU1)
	22:02	21:11	19:53	18:33	35 09:44 (Pr25)	16:19 20 09:26 (Pr3a) 15:38 17 13:18 (JU1)
9	04:36	05:29	06:31	07:32	08:29 (PrRR3)	07:38 09:05 (Pr3a) 08:34 13:00 (JU1)
	22:01	21:09	19:51	18:30	44 09:47 (Pr25)	16:17 23 09:28 (Pr3a) 15:37 18 13:18 (JU1)
10	04:38	05:31	06:33	07:34	08:28 (PrRR3)	07:40 09:04 (Pr3a) 08:36 13:01 (JU1)
	22:00	21:06	19:48	18:28	50 09:50 (Pr25)	16:15 24 09:28 (Pr3a) 15:37 19 13:20 (JU1)
11	04:39	05:33	06:35	07:36	08:27 (PrRR3)	07:42 09:04 (Pr3a) 08:37 13:00 (JU1)
	21:59	21:04	19:45	18:25	55 09:51 (Pr25)	16:13 26 09:30 (Pr3a) 15:37 21 13:21 (JU1)
12	04:40	05:35	06:37	07:38	08:27 (PrRR3)	07:44 09:03 (Pr3a) 08:38 13:00 (JU1)
	21:58	21:02	19:43	18:23	57 09:52 (Pr25)	16:11 27 09:30 (Pr3a) 15:36 21 13:21 (JU1)
13	04:42	05:37	06:39	07:40	08:26 (PrRR3)	07:46 09:02 (Pr3a) 08:39 13:00 (JU1)
	21:57	20:59	19:40	18:20	70 16:57 (Pr11)	16:09 28 09:30 (Pr3a) 15:36 22 13:22 (JU1)
14	04:43	05:39	06:41	07:42	08:26 (PrRR3)	07:49 09:03 (Pr3a) 08:40 13:01 (JU1)
	21:56	20:57	19:37	18:18	78 16:59 (Pr11)	16:08 29 09:32 (Pr3a) 15:36 22 13:23 (JU1)
15	04:45	05:41	06:43	07:44	08:26 (PrRR3)	07:51 09:02 (Pr3a) 08:41 13:01 (JU1)
	21:54	20:55	19:35	18:15	84 17:02 (Pr11)	16:06 30 09:32 (Pr3a) 15:36 23 13:24 (JU1)
16	04:46	05:43	06:45	07:46	08:26 (PrRR3)	07:53 09:03 (Pr3a) 08:42 13:01 (JU1)
	21:53	20:52	19:32	18:12	88 17:03 (Pr11)	16:04 30 09:33 (Pr3a) 15:36 23 13:24 (JU1)
17	04:48	05:45	06:47	07:48	08:26 (PrRR3)	07:55 09:03 (Pr3a) 08:43 13:02 (JU1)
	21:52	20:50	19:29	18:10	91 17:04 (Pr11)	16:02 30 09:33 (Pr3a) 15:36 23 13:25 (JU1)
18	04:49	05:47	06:49	07:50	08:26 (PrRR3)	07:57 09:03 (Pr3a) 08:44 13:01 (JU1)
	21:50	20:47	19:27	18:07	91 17:04 (Pr11)	16:01 30 09:33 (Pr3a) 15:36 24 13:25 (JU1)
19	04:51	05:49	06:51	07:52	08:27 (PrRR3)	07:59 09:04 (Pr3a) 08:45 13:02 (JU1)
	21:49	20:45	19:24	18:05	91 17:04 (Pr11)	15:59 29 09:33 (Pr3a) 15:37 24 13:26 (JU1)
20	04:52	05:51	06:53	07:55	08:29 (PrRR3)	08:01 09:04 (Pr3a) 08:46 13:03 (JU1)
	21:47	20:43	19:21	18:02	89 17:05 (Pr11)	15:57 29 09:33 (Pr3a) 15:37 24 13:27 (JU1)
21	04:54	05:53	06:55	07:57	08:30 (PrRR3)	08:03 09:04 (Pr3a) 08:46 13:03 (JU1)
	21:46	20:40	19:18	18:00	87 17:05 (Pr11)	15:56 29 09:33 (Pr3a) 15:37 23 13:26 (JU1)
22	04:56	05:55	06:57	07:59	08:33 (PrRR3)	08:05 09:04 (Pr3a) 08:47 13:04 (JU1)
	21:44	20:38	19:16	18:16 (06)	82 17:05 (Pr11)	15:54 29 09:33 (Pr3a) 15:38 23 13:27 (JU1)
23	04:57	05:57	06:59	08:01	09:13 (Pr25)	08:07 09:05 (Pr3a) 08:47 13:04 (JU1)
	21:42	20:35	19:13	18:18 (06)	72 17:05 (Pr11)	15:53 29 09:34 (Pr3a) 15:38 23 13:27 (JU1)
24	04:59	05:59	07:01	08:03	09:13 (Pr25)	08:09 09:06 (Pr3a) 08:48 13:05 (JU1)
	21:41	20:33	19:10	18:20 (06)	71 17:05 (Pr11)	15:51 27 09:33 (Pr3a) 15:39 24 13:29 (JU1)
25	05:01	06:01	07:03	07:05	08:13 (Pr25)	08:11 09:06 (Pr3a) 08:48 13:05 (JU1)
	21:39	20:30	19:08	18:21 (06)	70 16:04 (Pr11)	15:50 27 09:33 (Pr3a) 15:39 24 13:29 (JU1)
26	05:03	06:03	07:05	07:07	08:14 (Pr25)	08:13 09:07 (Pr3a) 08:48 13:06 (JU1)
	21:37	20:27	19:05	18:21 (06)	68 16:04 (Pr11)	15:49 26 09:33 (Pr3a) 15:40 23 13:29 (JU1)
27	05:05	06:05	07:07	07:10	08:14 (Pr25)	08:15 09:08 (Pr3a) 08:49 13:06 (JU1)
	21:35	20:25	19:02	18:21 (06)	66 16:03 (Pr11)	15:48 24 09:32 (Pr3a) 15:41 23 13:29 (JU1)
28	05:06	06:07	07:09	07:12	08:14 (Pr25)	08:17 09:08 (Pr3a) 08:49 13:07 (JU1)
	21:33	20:22	19:00	18:21 (06)	64 16:02 (Pr11)	15:46 24 09:32 (Pr3a) 15:42 23 13:30 (JU1)
29	05:08	06:09	07:11	07:14	08:15 (Pr25)	08:18 09:09 (Pr3a) 08:49 13:08 (JU1)
	21:32	20:20	18:57	18:21 (06)	60 16:01 (Pr12)	15:45 23 09:32 (Pr3a) 15:43 22 13:30 (JU1)
30	05:10	06:11	07:13	07:16	08:16 (Pr25)	08:20 09:10 (Pr3a) 08:49 13:09 (JU1)
	21:30	20:17	18:54	18:20 (06)	56 16:01 (Pr12)	15:44 22 09:32 (Pr3a) 15:44 21 13:30 (JU1)
31	05:12	06:13		07:18	08:16 (Pr25)	08:19 08:49 13:09 (JU1)
	21:28	20:15		16:36	54 16:00 (Pr12)	15:45 21 13:30 (JU1)
Potential sun hours	529	469	384	324	248	217
Total, worst case			159	1778	836	675
Sun reduction			0,43	0,29	0,08	0,08
Oper. time red.			1,00	1,00	1,00	1,00
Wind dir. red.			1,00	1,00	1,00	1,00
Total reduction			0,43	0,29	0,08	0,08
Total, real			69	516	63	57

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Maurini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (509)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	January	February	March	April	May	June	
1	08:48 15:46	08:12 16:43	07:09 17:45	16:51 (AP2) 17:13 (AP2)	06:47 19:51	05:31 20:53	04:34 21:50
2	08:48 15:48	08:10 16:46	07:06 17:48	16:50 (AP2) 17:13 (AP2)	06:44 19:53	05:28 20:55	04:33 21:51
3	08:48 15:49	08:08 16:48	07:03 17:50	16:50 (AP2) 17:12 (AP2)	06:41 19:55	05:26 20:57	04:32 21:53
4	08:47 15:50	08:07 16:50	07:01 17:52	16:51 (AP2) 17:12 (AP2)	06:39 19:57	05:24 20:59	04:31 21:54
5	08:47 15:52	08:04 16:52	06:58 17:54	16:50 (AP2) 17:11 (AP2)	06:36 19:59	05:21 21:01	04:30 21:55
6	08:46 15:53	08:02 16:54	06:56 17:56	16:52 (AP2) 17:11 (AP2)	06:33 20:01	05:19 21:03	04:29 21:57
7	08:46 15:54	08:00 16:57	06:53 17:58	16:52 (AP2) 17:09 (AP2)	06:31 20:03	19:19 (Pr3a) 21:05	05:17 21:58
8	08:45 15:56	07:58 16:59	06:51 18:01	16:53 (AP2) 17:07 (AP2)	06:28 20:05	19:15 (Pr3a) 21:07	05:15 21:59
9	08:44 15:58	07:56 17:01	06:48 18:03	16:55 (AP2) 17:04 (AP2)	06:26 20:07	19:13 (Pr3a) 21:09	05:13 21:59
10	08:44 15:59	07:54 17:03	06:45 18:05	17:33 (AP6.1) 17:37 (AP6.1)	06:23 20:09	19:10 (Pr3a) 21:11	05:11 22:01
11	08:43 16:01	07:52 17:06	06:43 18:07	17:30 (AP6.1) 17:39 (AP6.1)	06:20 20:12	19:10 (Pr3a) 21:13	05:09 22:02
12	08:42 16:03	07:49 17:08	06:40 18:09	17:28 (AP6.1) 17:40 (AP6.1)	06:18 20:14	19:08 (Pr3a) 21:15	05:07 22:03
13	08:41 16:04	07:47 17:10	06:37 18:11	17:28 (AP6.1) 17:43 (AP6.1)	06:15 20:16	19:07 (Pr3a) 21:17	05:05 22:03
14	08:40 16:06	07:45 17:12	06:35 18:13	17:27 (AP6.1) 17:45 (AP6.1)	06:12 20:18	19:06 (Pr3a) 21:19	05:03 22:04
15	08:39 16:08	07:43 17:15	06:32 18:15	17:26 (AP6.1) 17:45 (AP6.1)	06:10 20:20	19:06 (Pr3a) 21:21	05:01 22:05
16	08:38 16:10	07:40 17:17	06:29 18:18	17:26 (AP6.1) 17:46 (AP6.1)	06:07 20:22	19:05 (Pr3a) 21:23	04:59 22:05
17	08:36 16:12	07:38 17:19	06:27 18:20	17:26 (AP6.1) 17:45 (AP6.1)	06:05 20:24	19:05 (Pr3a) 21:25	04:57 22:06
18	08:35 16:14	07:36 17:21	06:24 18:22	17:26 (AP6.1) 17:44 (AP6.1)	06:02 20:26	19:04 (Pr3a) 21:27	04:55 22:06
19	08:34 16:16	07:33 17:24	06:21 18:24	17:27 (AP6.1) 17:43 (AP6.1)	06:00 20:28	19:05 (Pr3a) 21:29	04:53 22:07
20	08:32 16:18	07:31 17:26	06:19 18:26	17:28 (AP6.1) 17:41 (AP6.1)	05:57 20:30	19:04 (Pr3a) 21:31	04:52 22:07
21	08:31 16:20	07:28 17:28	06:16 18:28	17:29 (AP6.1) 17:39 (AP6.1)	05:55 20:32	19:05 (Pr3a) 21:32	04:50 22:07
22	08:30 16:22	07:26 17:30	06:13 18:30	05:52 20:34	19:06 (Pr3a) 21:34	20:11 (Pr25) 20:36 (Pr25)	04:48 22:08
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:37	19:06 (Pr3a) 21:36	20:12 (Pr25) 20:36 (Pr25)	04:47 22:08
24	08:26 16:26	07:21 17:35	06:08 17:05 (AP2)	05:47 20:39	19:07 (Pr3a) 21:38	20:12 (Pr25) 20:35 (Pr25)	04:45 22:08
25	08:25 16:28	07:19 17:37	06:05 17:07 (AP2)	05:45 20:41	19:08 (Pr3a) 21:39	20:13 (Pr25) 20:35 (Pr25)	04:43 22:08
26	08:23 16:30	07:16 17:39	06:03 17:10 (AP2)	05:42 20:43	19:09 (Pr3a) 21:41	20:14 (Pr25) 20:35 (Pr25)	04:42 22:08
27	08:21 16:32	07:14 17:41	06:00 17:12 (AP2)	05:40 20:45	19:11 (Pr3a) 21:43	20:14 (Pr25) 20:35 (Pr25)	04:40 22:08
28	08:20 16:35	07:11 17:43	05:57 17:12 (AP2)	05:38 20:47	19:14 (Pr3a) 21:44	20:14 (Pr25) 20:33 (Pr25)	04:39 22:07
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	20:15 (Pr25) 20:33 (Pr25)	04:27 22:07
30	08:16 16:39		06:52 19:47	05:33 20:51	04:36 21:47	20:16 (Pr25) 20:32 (Pr25)	04:27 22:07
31	08:14 16:41		06:49 19:49		04:35 21:49	20:17 (Pr25) 20:32 (Pr25)	
Potential sun hours	236	266	366	426	507	528	
Total, worst case		76	341	532	586	28	
Sun reduction		0,23	0,39	0,44	0,56	0,57	
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		0,23	0,39	0,44	0,56	0,57	
Total, real		17	133	235	330	16	

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Maurini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (509)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:28 22:06	05:14 21:25	20:21 (Pr25) 20:12	19:09 (Pr3a) 18:52	18:08 (AP6.1) 18:21 (AP6.1)	07:20 16:34
2	04:29 22:06	05:16 21:23	20:22 (Pr25) 20:09	19:34 (Pr3a) 19:32 (Pr3a)	18:21 (AP6.1) 18:19 (AP6.1)	16:34 16:32
3	04:30 22:05	05:18 21:21	20:23 (Pr25) 20:07	19:11 (Pr3a) 19:31 (Pr3a)	18:10 (AP6.1) 18:16 (AP6.1)	16:25 16:30
4	04:31 22:05	05:20 21:19	20:24 (Pr25) 20:04	19:13 (Pr3a) 19:28 (Pr3a)	17:36 (AP2) 17:40 (AP2)	16:27 16:27
5	04:32 22:04	05:21 21:17	20:25 (Pr25) 20:01	19:15 (Pr3a) 19:24 (Pr3a)	17:31 (AP2) 17:43 (AP2)	16:29 16:25
6	04:33 22:03	05:23 21:15	20:26 (Pr25) 20:41 (Pr25)	19:25 19:59	17:29 (AP2) 17:45 (AP2)	16:31 16:23
7	04:34 22:03	05:25 21:13	20:28 (Pr25) 20:39 (Pr25)	19:27 19:56	17:27 (AP2) 17:46 (AP2)	16:33 16:21
8	04:35 22:02	05:27 21:11	20:32 (Pr25) 20:35 (Pr25)	19:29 19:53	17:26 (AP2) 17:46 (AP2)	16:35 16:19
9	04:36 22:01	20:31 (Pr25) 20:34 (Pr25)	05:29 21:08	06:31 19:51	17:25 (AP2) 17:46 (AP2)	16:38 16:17
10	04:38 22:00	20:28 (Pr25) 20:36 (Pr25)	05:31 21:06	06:33 19:48	17:24 (AP2) 17:46 (AP2)	16:17 16:15
11	04:39 21:59	20:28 (Pr25) 20:39 (Pr25)	05:33 21:04	06:35 19:45	17:25 (AP2) 17:47 (AP2)	16:15 16:13
12	04:40 21:58	20:26 (Pr25) 20:40 (Pr25)	05:35 21:02	06:37 19:43	17:24 (AP2) 17:46 (AP2)	16:11 16:11
13	04:42 21:57	20:25 (Pr25) 20:41 (Pr25)	05:37 20:59	06:39 19:40	17:24 (AP2) 17:46 (AP2)	16:09 16:09
14	04:43 21:55	20:24 (Pr25) 20:41 (Pr25)	05:39 20:57	06:41 19:37	17:24 (AP2) 17:45 (AP2)	16:09 16:07
15	04:44 21:54	20:24 (Pr25) 20:43 (Pr25)	05:41 20:54	19:21 (Pr3a) 19:31 (Pr3a)	17:25 (AP2) 17:43 (AP2)	16:07 16:06
16	04:46 21:53	20:23 (Pr25) 20:43 (Pr25)	05:43 20:52	19:18 (Pr3a) 19:34 (Pr3a)	17:26 (AP2) 17:41 (AP2)	16:06 16:04
17	04:47 21:51	20:23 (Pr25) 20:43 (Pr25)	05:45 20:50	19:16 (Pr3a) 19:36 (Pr3a)	17:28 (AP2) 17:38 (AP2)	16:04 16:02
18	04:49 21:50	20:23 (Pr25) 20:45 (Pr25)	05:47 20:47	19:13 (Pr3a) 19:36 (Pr3a)	17:30 (AP2) 18:07	16:02 16:01
19	04:51 21:49	20:22 (Pr25) 20:45 (Pr25)	05:49 20:45	19:12 (Pr3a) 19:37 (Pr3a)	17:35 (AP2) 18:05	16:01 15:59
20	04:52 21:47	20:22 (Pr25) 20:46 (Pr25)	05:51 20:42	19:11 (Pr3a) 19:38 (Pr3a)	18:07 18:02	15:57 15:57
21	04:54 21:45	20:21 (Pr25) 20:46 (Pr25)	05:53 20:40	19:10 (Pr3a) 19:38 (Pr3a)	18:07 18:00	15:57 15:56
22	04:56 21:44	20:21 (Pr25) 20:46 (Pr25)	05:55 20:37	19:09 (Pr3a) 19:39 (Pr3a)	18:15 (AP6.1) 18:22 (AP6.1)	15:56 15:54
23	04:57 21:42	20:21 (Pr25) 20:46 (Pr25)	05:57 20:35	19:09 (Pr3a) 19:39 (Pr3a)	18:12 (AP6.1) 18:24 (AP6.1)	15:54 15:53
24	04:59 21:40	20:21 (Pr25) 20:47 (Pr25)	05:59 20:32	19:08 (Pr3a) 19:39 (Pr3a)	18:10 (AP6.1) 18:26 (AP6.1)	15:53 15:51
25	05:01 21:39	20:21 (Pr25) 20:47 (Pr25)	06:01 20:30	19:08 (Pr3a) 19:39 (Pr3a)	18:09 (AP6.1) 18:26 (AP6.1)	15:50 15:50
26	05:03 21:37	20:20 (Pr25) 20:47 (Pr25)	06:03 20:27	19:07 (Pr3a) 19:38 (Pr3a)	18:08 (AP6.1) 18:26 (AP6.1)	15:49 15:49
27	05:04 21:35	20:21 (Pr25) 20:47 (Pr25)	06:05 20:25	19:07 (Pr3a) 19:38 (Pr3a)	18:07 (AP6.1) 18:26 (AP6.1)	15:48 15:48
28	05:06 21:33	20:21 (Pr25) 20:48 (Pr25)	06:07 20:22	19:07 (Pr3a) 19:37 (Pr3a)	18:07 (AP6.1) 18:26 (AP6.1)	15:46 15:46
29	05:08 21:31	20:21 (Pr25) 20:47 (Pr25)	06:09 20:20	19:07 (Pr3a) 19:37 (Pr3a)	18:06 (AP6.1) 18:26 (AP6.1)	15:44 15:45
30	05:10 21:29	20:21 (Pr25) 20:47 (Pr25)	06:11 20:17	19:07 (Pr3a) 19:36 (Pr3a)	18:06 (AP6.1) 18:23 (AP6.1)	15:44 15:44
31	05:12 21:27	20:22 (Pr25) 20:47 (Pr25)	06:13 20:14	19:08 (Pr3a) 19:35 (Pr3a)	18:07 18:36	15:44 15:45
Potential sun hours	529	469	384	324	248	217
Total, worst case	481	586	237	279		
Sun reduction	0,47	0,52	0,43	0,29		
Oper. time red.	1,00	1,00	1,00	1,00		
Wind dir. red.	1,00	1,00	1,00	1,00		
Total reduction	0,47	0,52	0,43	0,29		
Total, real	227	306	102	81		

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Maurinmajas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (577)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:27	15:41
5	08:47	08:04	06:58	06:36	05:22	04:30	04:32	05:22	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:55	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:39
8	08:45	07:58	06:50	06:28	05:15	04:28	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:24	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:57	04:52	04:24	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:41	04:26	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:35	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:37	04:28	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Meldri - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (526)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Mež noras - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (424)  
Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47 08:48 15:48 08:48 15:50 08:47 15:51 08:47 15:52 08:46 15:54 08:46 15:55 08:45 15:57 08:44 15:58 08:44 16:00 08:43 16:02 08:42 16:03 08:41 16:05 08:40 16:07 08:39 16:09 08:38 16:11 08:36 16:13 08:35 16:14 08:34 16:16 08:32 16:18 08:31 16:20 08:30 16:23 08:28 16:25 08:26 16:27 08:25 16:29 08:23 16:31 08:22 16:33 08:20 16:35 08:18 16:37 08:16 16:40 08:14 16:42	08:12 16:44 08:11 16:46 08:09 16:48 08:07 16:51 08:05 16:53 08:03 16:55 08:00 16:57 07:58 16:59 07:56 17:02 07:54 17:04 07:52 17:06 07:50 17:08 07:47 17:11 07:45 17:13 07:43 17:15 07:41 17:17 07:38 17:20 07:36 17:22 07:33 17:24 07:31 17:26 07:29 17:28 07:26 17:31 07:24 17:33 07:21 17:35 07:19 17:37 07:16 17:39 07:14 17:42 07:11 17:44 08:18 16:37 08:16 16:40 08:14 16:42	07:09 16:29 (DD3) 07:06 17:48 07:04 17:50 07:01 17:52 06:59 17:55 06:56 17:57 06:53 17:59 06:51 18:01 06:48 18:03 06:46 18:05 06:43 18:07 06:40 18:09 06:38 18:12 06:35 18:14 06:32 18:16 06:30 18:18 06:27 18:20 06:24 18:22 06:22 18:24 06:19 18:26 06:16 18:28 06:14 18:30 06:11 18:32 06:08 18:35 06:06 18:37 06:03 18:39 06:00 18:41 05:58 18:43 06:55 19:45 06:52 19:47 06:50 19:49	16:29 (DD3) 16:33 (DD3) 16:36 (DD3) 17:23 (DD1) 17:24 (DD1) 17:19 (DD1) 17:25 (DD1) 17:18 (DD1) 17:28 (DD1) 17:17 (DD1) 17:30 (DD1) 17:15 (DD1) 17:32 (DD1) 17:15 (DD1) 17:34 (DD1) 17:15 (DD1) 17:34 (DD1) 17:14 (DD1) 17:33 (DD1) 17:15 (DD1) 17:33 (DD1) 17:16 (DD1) 17:32 (DD1) 17:16 (DD1) 17:30 (DD1) 17:19 (DD1) 17:28 (DD1) 06:08 20:22 06:05 20:24 06:03 20:26 06:00 20:28 05:58 20:30 05:55 20:33 05:53 20:35 05:50 20:37 05:48 20:39 05:45 20:41 05:43 20:43 05:41 20:45 05:38 20:47 05:36 20:49 05:33 20:51 04:36 21:49	05:31 20:53 05:29 20:55 05:27 20:57 05:24 20:59 05:22 21:01 05:20 21:03 05:18 21:05 05:16 21:07 05:13 21:09 05:11 21:11 05:09 21:13 05:07 21:15 05:05 21:17 05:03 21:19 05:01 21:21 04:59 20:22 04:58 21:25 04:56 21:27 04:54 21:29 04:52 21:31 04:51 21:32 04:49 21:34 04:47 21:36 04:46 21:38 04:44 21:39 04:43 21:41 04:41 21:42 04:40 21:44 04:38 21:46 04:37 21:47 04:36 21:49	04:35 21:50 04:34 21:51 04:33 21:53 04:32 21:54 04:31 21:55 04:30 21:56 04:29 21:58 04:28 21:59 04:28 22:01 04:27 22:01 04:26 22:02 04:40 21:59 04:41 21:58 04:42 21:57 04:45 21:55 04:45 21:54 04:47 21:53 04:48 21:52 04:50 21:51 04:49 21:53 04:51 21:54 04:53 20:45 04:55 20:43 04:55 20:40 04:56 20:38 04:58 05:58 20:35 05:00 21:40 05:02 21:39 05:03 21:37 05:05 21:35 06:06 20:22 06:08 20:22 06:10 20:20 06:12 20:17 06:14 21:28 05:13	04:29 21:26 04:30 21:26 04:31 22:05 04:33 22:05 04:34 22:04 04:35 22:03 04:36 22:02 04:37 22:01 04:38 22:06 04:40 21:59 04:41 21:58 04:42 21:57 04:45 21:55 04:45 21:54 04:47 21:53 04:48 21:52 04:50 21:51 04:49 21:53 04:51 21:54 04:53 20:45 04:55 20:43 04:55 20:40 04:56 20:38 04:58 05:58 20:35 05:00 21:40 05:02 21:39 06:04 20:27 06:06 20:25 07:07 19:00 06:08 20:22 06:10 20:20 06:12 20:17 06:14 20:15	06:16 20:12 05:16 06:18 20:09 06:20 20:07 06:22 20:04 06:24 20:01 06:26 19:59 06:28 19:56 06:30 19:54 06:32 19:51 06:34 19:48 06:36 19:46 06:38 19:43 06:40 19:40 06:42 19:37 06:44 19:35 06:46 19:32 06:47 19:29 06:49 19:27 06:51 19:24 06:53 19:21 06:55 19:19 06:57 19:16 06:59 19:13 07:01 19:11 07:03 19:08 07:05 19:07 19:05 07:07 19:03 07:09 18:01 (DD1) 07:12 18:08 (DD1) 07:14 18:10 (DD1) 07:16 18:11 (DD1) 07:18 16:37	07:15 17:55 (DD1) 18:52 17:54 (DD1) 18:12 (DD1) 17:53 (DD1) 18:12 (DD1) 17:52 (DD1) 18:12 (DD1) 17:52 (DD1) 18:10 (DD1) 17:52 (DD1) 18:08 (DD1) 17:53 (DD1) 18:05 (DD1) 17:54 (DD1) 18:02 (DD1) 17:56 (DD1) 18:00 (DD1) 17:48 18:00 17:04 (DD3) 17:13 (DD3) 17:01 (DD3) 17:15 (DD3) 16:59 (DD3) 17:17 (DD3) 16:58 (DD3) 17:18 (DD3) 16:57 (DD3) 17:19 (DD3) 16:56 (DD3) 17:20 (DD3) 16:55 (DD3) 17:19 (DD3) 16:54 (DD3) 17:18 (DD3) 16:53 (DD3) 17:19 (DD3) 16:52 (DD3) 17:20 (DD3) 16:51 (DD3) 16:10 (DD3) 17:18 (DD3) 16:55 (DD3) 17:17 (DD3) 15:56 (DD3) 16:16 (DD3) 15:58 (DD3) 16:15 (DD3) 15:59 (DD3) 16:13 (DD3) 16:01 (DD3) 16:10 (DD3) 17:58 (DD1) 18:10 (DD1) 17:56 (DD1) 18:11 (DD1) 17:18 16:37	07:20 16:35 08:23 16:32 08:25 16:30 08:27 16:28 08:28 16:26 08:30 16:24 08:31 16:22 08:39 16:20 08:34 16:18 08:35 16:16 08:37 16:14 08:38 16:12 08:39 16:10 08:40 16:08 08:41 16:06 08:42 16:05 08:43 16:03 08:44 16:01 08:45 16:00 08:45 15:58 08:46 15:58 08:47 15:58 08:47 15:53 08:47 15:40 08:48 15:41 08:48 15:42 08:48 15:43 08:48 15:45 08:48 15:45 15:46 217		
Potential sun hours	236	266	313	176	426	507	528	528	469	384	324	248
Total, worst case			0,22	0,39						34	466	
Sun reduction			1,00	1,00						0,43	0,29	
Oper. time red.			1,00	1,00						1,00	1,00	
Wind dir. red.			1,00	1,00						1,00	1,00	
Total reduction			0,22	0,39						0,43	0,29	
Total, real			70	69						15	135	

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Mežotnes - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (431)  
Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:14 21:25	06:16 20:12	07:15 18:52	07:20 16:35	08:22 15:44	
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:16 21:23	06:18 20:09	07:17 18:49	07:23 16:32	08:23 15:43	
3	08:48 15:50	08:09 16:48	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:18 21:21	06:20 20:07	07:19 18:47	07:25 16:30	08:25 15:42	
4	08:47 15:51	08:07 16:51	07:01 17:52	06:39 19:57	05:24 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:21 18:44	07:27 16:28	08:27 15:41	
5	08:47 15:52	08:05 16:53	06:59 17:55	06:36 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:01	07:24 18:41	07:29 16:26	08:28 15:41	
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:01	05:20 21:03	04:30 21:56	04:34 22:03	05:24 21:15	06:26 19:59	07:26 18:39	07:31 16:24	08:30 15:40	
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:18 21:05	04:29 21:58	04:35 22:03	05:26 21:13	06:28 19:56	07:28 18:36	07:33 16:22	08:31 15:39	
8	08:45 15:57	07:58 16:59	06:51 18:01	06:29 20:06	05:16 21:07	04:28 21:59	04:36 22:02	05:28 21:11	06:30 19:53	07:30 18:33	07:36 16:20	08:33 15:39	
9	08:44 15:58	07:56 17:02	06:48 18:03	06:26 20:08	05:13 21:09	04:28 22:00	04:37 22:01	05:30 21:08	06:32 19:51	07:32 18:31	07:38 16:18	08:34 15:38	
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:11	04:27 22:01	04:38 22:00	05:32 21:06	06:34 19:48	07:34 18:28	07:40 16:16	08:35 15:38	
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:13	04:26 22:02	04:40 21:59	05:34 21:04	06:36 19:45	07:36 18:26	07:42 16:14	08:37 15:37	
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:26 22:02	04:41 21:58	05:36 21:02	06:38 19:43	07:38 18:23	07:44 16:12	08:38 15:37	
13	08:41 16:05	07:47 17:11	06:38 18:12	06:16 20:16	05:05 21:17	04:25 22:03	04:42 21:56	05:38 20:59	06:40 19:40	18:39 (DD3) 18:47 (DD3)	07:40 18:20	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:42 19:37	18:36 (DD3) 18:49 (DD3)	07:42 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:25 22:05	04:45 21:54	05:42 20:55	06:43 19:35	18:34 (DD3) 18:50 (DD3)	07:44 18:15	07:50 16:06	08:41 15:37
16	08:38 16:11	07:40 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:25 22:05	04:47 21:53	05:44 20:52	06:45 19:32	18:33 (DD3) 18:51 (DD3)	07:46 18:13	07:53 16:05	08:42 15:37
17	08:36 16:13	07:38 17:20	06:27 18:20	06:05 20:24	04:58 21:25	04:24 22:06	04:48 21:51	05:46 20:50	06:47 19:29	18:32 (DD3) 18:51 (DD3)	07:48 18:10	07:55 16:03	08:43 15:37
18	08:35 16:14	07:36 17:22	06:24 18:22	06:03 20:26	04:56 21:27	04:24 22:06	04:50 21:50	05:48 20:47	06:49 19:27	18:31 (DD3) 18:51 (DD3)	07:50 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:22 18:24	6 17:50 (DD3) 17:56 (DD3)	06:00 20:28	04:54 21:29	04:51 22:07	05:50 20:45	06:51 19:24	18:31 (DD3) 18:51 (DD3)	07:53 18:05	07:59 16:00	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	10 17:48 (DD3) 17:58 (DD3)	05:58 20:30	04:52 21:30	04:53 22:07	05:52 20:42	06:53 19:21	18:31 (DD3) 18:50 (DD3)	07:55 18:03	08:01 15:58	08:45 15:38
21	08:31 16:20	07:29 17:28	06:16 18:28	14 17:46 (DD3) 18:00 (DD3)	05:55 20:32	04:51 21:32	04:55 22:07	05:54 20:40	06:55 19:19	18:31 (DD3) 18:49 (DD3)	07:57 18:00	08:03 15:56	08:46 15:38
22	08:29 16:23	07:26 17:31	06:14 18:30	18 17:45 (DD3) 18:03 (DD3)	05:53 20:35	04:49 21:34	04:56 22:08	05:56 20:38	06:57 19:16	18:31 (DD3) 18:46 (DD3)	07:59 17:58	08:05 15:55	08:46 15:38
23	08:28 16:25	07:24 17:33	06:11 18:32	20 17:44 (DD3) 18:04 (DD3)	05:50 20:37	04:47 21:36	04:58 22:08	05:58 20:35	06:59 19:13	18:32 (DD3) 18:43 (DD3)	08:01 17:55	08:07 15:53	08:47 15:39
24	08:26 16:27	07:21 17:35	06:08 18:35	20 17:43 (DD3) 18:03 (DD3)	05:48 20:39	04:46 21:37	04:25 22:08	05:00 20:32	07:01 19:11	18:33 (DD3) 18:41 (DD3)	08:03 17:53	08:09 15:52	08:47 15:40
25	08:25 16:29	07:19 17:37	06:06 18:37	20 17:44 (DD3) 18:04 (DD3)	05:45 20:41	04:44 21:39	04:25 22:08	05:02 20:30	06:02 19:08	18:36 (DD3) 18:38 (DD3)	07:05 16:51	08:11 15:51	08:48 15:40
26	08:23 16:31	07:16 17:39	06:03 18:39	19 17:44 (DD3) 18:03 (DD3)	05:43 20:43	04:43 21:41	05:03 22:08	06:04 20:27	07:05 19:05	18:38 (DD3)	07:07 16:48	08:13 15:49	08:48 15:41
27	08:21 16:33	07:14 17:42	06:00 18:41	19 17:43 (DD3) 18:02 (DD3)	05:41 20:45	04:41 21:42	05:05 22:08	06:06 20:25	07:07 19:03	18:36 (DD3)	07:10 16:46	08:15 15:48	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	16 17:45 (DD3) 18:01 (DD3)	05:38 20:47	04:40 21:44	05:07 22:07	06:08 20:22	07:09 19:00	18:36 (DD3)	07:12 16:44	08:16 15:47	08:48 15:43
29	08:18 16:37	07:11 17:45	05:55 18:45	14 18:45 (DD3) 18:59 (DD3)	05:36 20:49	04:38 21:46	05:09 22:07	06:10 20:20	07:11 18:57	18:36 (DD3)	07:14 16:41	08:18 15:46	08:48 15:44
30	08:16 16:40	07:11 17:47	05:52 18:47	9 18:47 (DD3) 18:56 (DD3)	05:33 20:51	04:37 21:47	05:11 22:07	06:12 20:17	07:13 18:55	18:36 (DD3)	07:16 16:39	08:20 15:45	08:48 15:45
31	08:14 16:42	07:11 17:49	05:50 18:49	18:56 (DD3)	20:51	21:47	22:07	20:15	18:55	18:36 (DD3)	07:18 16:37	08:22 15:46	08:48 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217	
Total, worst case													
Sun reduction			185						187				
Oper. time red.			0,39						0,43				
Wind dir. red.			1,00						1,00				
Total reduction			0,39						0,43				
Total, real			72						81				

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Mež rozites - Shadow Receptor:  $1,0 \times 1,0$  Azimuth:  $3,1^\circ$  Slope:  $90,0^\circ$  (535)  
 Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Mež viteni - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (511)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Mež abele - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (481)  
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	January	February	March	April	May	June
1	08:48	08:12	07:09	16:48 (Pr3a)	06:47	18:07 (PrRR3)
	15:46	16:43	17:45	23	17:11 (Pr3a)	19:51
2	08:48	08:10	07:06	16:47 (Pr3a)	06:44	18:07 (PrRR3)
	15:48	16:45	17:48	24	17:11 (Pr3a)	19:53
3	08:48	08:09	07:03	16:46 (Pr3a)	06:41	18:07 (PrRR3)
	15:49	16:48	17:50	25	17:11 (Pr3a)	19:55
4	08:47	08:07	07:01	16:46 (Pr3a)	06:39	18:08 (PrRR3)
	15:50	16:50	17:52	25	17:11 (Pr3a)	19:57
5	08:47	08:04	06:58	16:46 (Pr3a)	06:36	18:08 (PrRR3)
	15:52	16:52	17:54	24	17:10 (Pr3a)	19:59
6	08:46	08:02	06:56	16:47 (Pr3a)	06:33	18:09 (PrRR3)
	15:53	16:54	17:56	23	17:10 (Pr3a)	20:01
7	08:46	08:00	06:53	16:47 (Pr3a)	06:31	18:10 (PrRR3)
	15:54	16:57	17:58	22	17:09 (Pr3a)	20:03
8	08:45	07:58	06:51	16:47 (Pr3a)	06:28	18:10 (PrRR3)
	15:56	16:59	18:01	21	17:08 (Pr3a)	20:05
9	08:44	07:56	06:48	16:48 (Pr3a)	06:25	18:13 (PrRR3)
	15:58	17:01	18:03	18	17:06 (Pr3a)	20:07
10	08:44	07:54	06:45	16:50 (Pr3a)	06:23	18:14 (PrRR3)
	15:59	17:03	18:05	15	17:05 (Pr3a)	20:09
11	08:43	07:52	06:43	16:52 (Pr3a)	06:20	18:18 (PrRR3)
	16:01	17:06	18:07	9	17:01 (Pr3a)	20:12
12	08:42	07:49	06:40		06:18	
	16:03	17:08	18:09		20:14	
13	08:41	07:47	06:37		06:15	
	16:04	17:10	18:11		20:16	
14	08:40	07:45	06:35		06:12	
	16:06	17:12	18:13		20:18	
15	08:39	07:43	06:32		06:10	
	16:08	17:15	18:15		20:20	
16	08:38	07:40	06:29		06:07	
	16:10	17:17	18:17		20:22	
17	08:36	07:38	06:27	17:30 (PrRR3)	06:05	
	16:12	17:19	18:20	2	17:32 (PrRR3)	20:24
18	08:35	07:36	06:24	17:22 (PrRR3)	06:02	
	16:14	17:21	18:22	16	17:38 (PrRR3)	20:26
19	08:34	07:33	06:21	17:20 (PrRR3)	06:00	
	16:16	17:23	18:24	22	17:42 (PrRR3)	20:28
20	08:32	07:31	06:19	17:17 (PrRR3)	05:57	
	16:18	17:26	18:26	26	17:43 (PrRR3)	20:30
21	08:31	07:28	06:16	17:15 (PrRR3)	05:55	
	16:20	17:28	18:28	29	17:44 (PrRR3)	20:32
22	08:30	07:26	06:13	17:13 (PrRR3)	05:52	
	16:22	17:30	18:30	37	18:01 (Pr25)	20:34
23	08:28	07:24	06:11	17:12 (PrRR3)	05:50	
	16:24	17:32	18:32	46	18:04 (Pr25)	20:37
24	08:26	07:21	16:56 (Pr3a)	06:08	17:11 (PrRR3)	05:47
	16:26	17:35	17:04 (Pr3a)	53	18:06 (Pr25)	20:39
25	08:25	07:19	16:52 (Pr3a)	06:05	17:09 (PrRR3)	05:45
	16:28	17:37	17:07 (Pr3a)	58	18:07 (Pr25)	20:41
26	08:23	07:16	16:51 (Pr3a)	06:03	17:09 (PrRR3)	05:42
	16:30	17:39	17:09 (Pr3a)	59	18:08 (Pr25)	20:43
27	08:21	07:14	16:49 (Pr3a)	06:00	17:08 (PrRR3)	05:40
	16:32	17:41	17:10 (Pr3a)	60	18:08 (Pr25)	20:45
28	08:20	07:11	16:48 (Pr3a)	05:57	17:07 (PrRR3)	05:38
	16:35	17:43	17:10 (Pr3a)	61	18:08 (Pr25)	20:47
29	08:18		06:55	18:08 (PrRR3)	05:35	
	16:37		19:45	61	19:09 (Pr25)	20:49
30	08:16		06:52	18:07 (PrRR3)	05:33	
	16:39		19:47	61	19:08 (Pr25)	20:51
31	08:14		06:49	18:06 (PrRR3)		
	16:41		19:49	61	19:07 (Pr25)	
Potential sun hours	236	266	366	426	507	528
Total, worst case		84	881	432		
Sun reduction		0,23	0,39	0,44		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		1,00	1,00	1,00		
Total reduction		0,23	0,39	0,44		
Total, real		19	345	191		

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Mež abele - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (481)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:28	05:14	06:15	18:17 (PrRR3)	07:15	07:20
	22:07	21:25	20:12	18:30 (PrRR3)	18:51	16:34
2	04:29	05:16	06:17	18:13 (PrRR3)	07:17	16:34
	22:06	21:23	20:09	18:33 (PrRR3)	18:49	16:32
3	04:30	05:18	06:19	18:11 (PrRR3)	07:19	16:32
	22:06	21:21	20:07	18:35 (PrRR3)	18:46	16:30
4	04:31	05:19	06:21	18:09 (PrRR3)	07:21	16:30
	22:05	21:19	20:04	18:36 (PrRR3)	18:44	16:27
5	04:32	05:21	06:23	18:06 (PrRR3)	07:23	16:25
	22:04	21:17	20:01	18:36 (PrRR3)	18:41	16:25
6	04:33	05:23	06:25	18:04 (PrRR3)	07:25	16:25
	22:03	21:15	19:59	18:53 (Pr25)	18:38	16:23
7	04:34	05:25	06:27	18:03 (PrRR3)	07:27	16:23
	22:03	21:13	19:56	18:56 (Pr25)	18:36	16:21
8	04:35	05:27	06:29	18:02 (PrRR3)	07:29	16:21
	22:02	21:11	19:53	18:57 (Pr25)	18:33	16:19
9	04:36	05:29	06:31	18:01 (PrRR3)	07:31	16:19
	22:01	21:08	19:51	18:58 (Pr25)	18:30	16:17
10	04:38	05:31	06:33	18:00 (PrRR3)	07:34	16:17
	22:00	21:06	19:48	18:59 (Pr25)	18:28	16:15
11	04:39	05:33	06:35	17:59 (PrRR3)	07:36	16:15
	21:59	21:04	19:45	18:59 (Pr25)	18:25	16:13
12	04:40	05:35	06:37	17:59 (PrRR3)	07:38	16:13
	21:58	21:02	19:43	19:00 (Pr25)	18:23	16:11
13	04:42	05:37	06:39	17:58 (PrRR3)	07:40	16:11
	21:57	20:59	19:40	18:59 (Pr25)	18:20	16:09
14	04:43	05:39	06:41	17:58 (PrRR3)	07:42	16:09
	21:55	20:57	19:37	18:59 (Pr25)	18:17	16:07
15	04:44	05:41	06:43	17:58 (PrRR3)	07:44	16:07
	21:54	20:54	19:34	18:59 (Pr25)	18:15	16:06
16	04:46	05:43	06:45	17:58 (PrRR3)	07:46	16:06
	21:53	20:52	19:32	18:58 (Pr25)	18:12	16:04
17	04:47	05:45	06:47	17:58 (PrRR3)	07:48	16:04
	21:51	20:50	19:29	18:57 (Pr25)	18:10	16:02
18	04:49	05:47	06:49	17:58 (PrRR3)	07:50	16:02
	21:50	20:47	19:26	18:56 (Pr25)	18:07	16:00
19	04:51	05:49	06:51	17:57 (PrRR3)	07:52	16:00
	21:49	20:45	19:24	18:53 (Pr25)	18:05	15:59
20	04:52	05:51	06:53	17:58 (PrRR3)	07:54	15:59
	21:47	20:42	19:21	18:50 (Pr25)	18:02	15:57
21	04:54	05:53	06:55	17:58 (PrRR3)	07:57	15:57
	21:45	20:40	19:18	18:48 (Pr25)	18:00	15:56
22	04:56	05:55	06:57	17:59 (PrRR3)	07:59	15:56
	21:44	20:37	19:16	18:29 (PrRR3)	17:57	15:54
23	04:57	05:57	06:59	18:00 (PrRR3)	08:01	15:54
	21:42	20:35	19:13	18:27 (PrRR3)	17:55	15:53
24	04:59	05:59	07:01	18:02 (PrRR3)	08:03	15:53
	21:40	20:32	19:10	18:25 (PrRR3)	17:53	15:51
25	05:01	06:01	07:03	18:04 (PrRR3)	07:05	15:51
	21:39	20:30	19:08	18:22 (PrRR3)	16:50	15:50
26	05:03	06:03	07:05	18:08 (PrRR3)	07:07	15:50
	21:37	20:27	19:05	18:18 (PrRR3)	16:48	15:49
27	05:04	06:05	07:07		07:09	15:49
	21:35	20:25	19:02		16:45	15:48
28	05:06	06:07	07:09		07:12	15:48
	21:33	20:22	19:00		16:43	15:46
29	05:08	06:09	07:11		07:14	15:46
	21:31	20:20	18:57		16:41	15:45
30	05:10	06:11	07:13		07:16	15:45
	21:29	20:17	18:54		16:39	15:44
31	05:12	06:13			07:18	15:44
	21:27	20:14			16:36	15:45
Potential sun hours	529	469	384	324	248	217
Total, worst case			1099		318	
Sun reduction			0,43		0,29	
Oper. time red.			1,00		1,00	
Wind dir. red.			1,00		1,00	
Total reduction			0,43		0,29	
Total, real			474		92	

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

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

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Mež ares - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (506)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12	07:09	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:07	21:26	20:12	18:51	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:23	08:24
	15:47	16:45	17:48	19:53	20:55	21:52	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:21	20:07	18:46	16:29	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:05	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:56	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:03	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:36	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:45	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:34	07:40	08:36
	15:59	17:03	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:50	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:04	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:56	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:51	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:55	19:34	18:15	16:06	15:36
16	08:38	07:40	06:29	06:07	04:59	04:23	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:17	20:22	21:23	22:06	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:46
	16:18	17:26	18:26	20:30	21:31	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:08	21:46	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:13	05:52	04:48	04:23	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:27	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:34	18:34	20:39	21:38	22:08	21:41	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:22	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:15	08:48
	16:32	17:41	18:40	20:45	21:43	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:17	08:49
	16:34	17:43	18:43	20:47	21:44	22:08	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:30	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:49
	16:41		19:49		21:49		21:28	20:14		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	385	324	248	216
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Mieziš i (kad. apz. 76740020200001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (508)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:46 08:48 15:47	08:12 16:43 08:10 16:45	07:09 17:45 07:06 17:48	06:47 19:51 06:44 19:53	05:31 20:53 05:28 20:55	04:34 21:50 04:33 21:51	04:28 22:06 04:29 22:06	05:14 21:25 05:16 21:23	06:15 20:12 06:17 20:09	19:07 (PrRR3) 18:51 19:07 (PrRR3) 18:49	07:15 16:34 07:22 16:32	07:20 15:43 08:23 15:42
2	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	19:07 (PrRR3) 18:46	07:19 16:30	07:25 15:41
3	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	19:07 (PrRR3) 18:43	07:21 16:27	07:27 15:40
4	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	19:06 (PrRR3) 18:41	07:23 16:25	07:29 15:40
5	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:57	04:33 22:03	05:23 21:15	06:25 19:59	19:07 (PrRR3) 18:38	07:25 16:23	07:31 15:39
6	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	19:08 (PrRR3) 18:36	07:27 16:21	07:33 15:38
7	08:45 15:56	07:58 16:59	06:50 18:01	06:28 20:05	05:15 21:07	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53	19:10 (PrRR3) 18:33	07:29 16:19	07:35 15:38
8	08:44 15:58	07:56 17:01	06:48 18:03	06:25 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51	19:13 (PrRR3) 18:30	07:31 16:17	07:38 15:37
9	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 19:48	19:20 (PrRR3) 18:30	07:33 16:15	07:40 15:37
10	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:25 22:02	04:39 21:59	05:33 21:04	06:35 19:45	19:24 (PrRR3) 18:25	07:36 16:13	07:42 15:37
11	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:03	04:40 21:58	05:35 21:01	06:37 19:43	19:24 (PrRR3) 18:23	07:38 16:11	07:44 15:36
12	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:57	05:37 20:59	06:39 19:40	19:24 (PrRR3) 18:20	07:40 16:09	07:46 15:36
13	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	05:03 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 19:37	19:24 (PrRR3) 18:17	07:42 16:07	07:48 15:36
14	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:44 21:54	05:41 20:54	06:43 19:34	19:24 (PrRR3) 18:15	07:44 16:06	07:50 15:36
15	08:38 16:10	07:40 17:17	06:29 18:17	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 19:32	19:24 (PrRR3) 18:12	07:52 16:04	07:59 15:36
16	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:23 22:06	04:47 21:51	05:45 20:50	06:47 19:29	19:24 (PrRR3) 18:10	07:54 16:02	08:01 15:36
17	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:23 22:06	04:49 21:50	05:47 20:47	06:49 19:26	19:24 (PrRR3) 18:07	07:57 16:00	08:04 15:36
18	08:34 16:16	07:33 17:23	06:21 18:24	06:00 20:28	04:53 21:29	04:23 22:07	04:51 21:49	05:49 20:45	06:51 19:24	18:25 (Pr3a) 18:35 (Pr3a)	07:52 18:05	07:59 15:36
19	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:51 21:30	04:23 22:07	04:52 21:47	05:51 20:42	06:53 19:21	18:35 (Pr3a) 18:37 (Pr3a)	07:54 18:02	08:01 15:37
20	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:23 22:07	04:54 21:45	05:53 20:40	06:55 19:18	18:37 (Pr3a) 18:20 (Pr3a)	07:57 18:00	08:03 15:37
21	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 19:16	18:37 (Pr3a) 18:38 (Pr3a)	07:59 18:01	08:05 15:38
22	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	04:46 21:36	04:24 22:08	04:57 21:42	05:57 20:35	06:59 19:13	18:38 (Pr3a) 18:39 (Pr3a)	08:01 18:03	08:07 15:38
23	08:26 16:26	07:21 17:34	06:08 18:34	05:47 20:39	04:45 21:38	04:24 22:08	04:59 21:40	05:59 20:32	06:59 19:10	19:16 (PrRR3) 18:38 (Pr3a)	07:01 17:53	08:09 15:39
24	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:43 21:39	04:25 22:08	05:01 21:39	06:01 20:30	06:57 19:11	19:14 (PrRR3) 19:30 (PrRR3)	07:03 18:08	08:11 15:39
25	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	06:59 19:10	18:37 (Pr3a) 18:39 (Pr3a)	16:50 17:07	15:50 15:48
26	08:21 16:32	07:14 17:41	06:00 18:40	05:40 20:45	04:40 21:42	04:26 22:08	05:04 21:35	06:05 20:25	06:59 19:10	19:11 (PrRR3) 19:31 (PrRR3)	07:05 19:02	08:13 15:41
27	08:20 16:34	07:11 17:43	05:57 18:42	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	06:59 19:09	18:37 (Pr3a) 18:39 (Pr3a)	16:45 17:12	15:48 15:42
28	08:18 16:37	07:08 19:45	06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	06:59 19:08	18:37 (Pr3a) 18:37 (Pr3a)	16:50 17:14	15:50 15:48
29	08:16 16:39	07:06 19:47	06:52 19:49	05:33 20:51	04:36 21:47	04:27 22:07	05:10 21:29	06:11 20:17	06:59 19:07	18:37 (Pr3a) 18:37 (Pr3a)	17:14 18:54	15:48 15:44
30	08:14 16:41	07:04 19:49	06:49 19:49	05:31 20:51	04:35 21:49	04:27 22:07	05:12 21:27	06:13 20:14	06:59 19:07	18:37 (Pr3a) 18:37 (Pr3a)	17:18 18:54	15:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case												
Sun reduction			156	338				169	336			
Oper. time red.			0,39	0,44				0,52	0,43			
Wind dir. red.			1,00	1,00				1,00	1,00			
Total reduction			0,39	0,44				0,52	0,43			
Total, real			61	149				88	145			

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Mieziš i (kad. apz. 76740020200004) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (602) Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:46	08:12 16:43	07:09 17:45	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	25	19:08 (PrRR3) 19:33 (PrRR3)	07:15 18:51	07:20 16:34	08:22 15:43
2	08:48 15:47	08:10 16:45	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	25	19:08 (PrRR3) 19:33 (PrRR3)	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	24	19:08 (PrRR3) 19:32 (PrRR3)	07:19 18:46	07:25 16:30	08:25 15:41
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	23	19:08 (PrRR3) 19:31 (PrRR3)	07:21 18:43	07:27 16:27	08:27 15:40
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	21	19:08 (PrRR3) 19:29 (PrRR3)	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 19:33 (PrRR3)	04:29 21:03	04:33 21:57	05:23 22:03	06:25 19:59	19	19:09 (PrRR3) 19:28 (PrRR3)	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 19:33 (PrRR3)	04:28 21:05	04:34 22:03	05:25 21:13	06:27 19:56	15	19:10 (PrRR3) 19:25 (PrRR3)	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:56	07:58 16:59	06:50 18:01	06:28 20:05	05:15 19:33 (PrRR3)	04:27 21:07	04:35 22:02	05:27 21:11	06:29 19:53	11	19:12 (PrRR3) 19:23 (PrRR3)	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:25 20:07	05:13 19:34 (PrRR3)	04:27 21:09	04:36 22:01	05:29 21:08	06:31 19:51			07:31 18:30	07:38 16:17	08:34 15:37
10	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 19:34 (PrRR3)	04:26 21:11	04:38 22:00	05:31 21:06	06:33 19:48			07:33 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 19:34 (PrRR3)	04:25 21:13	04:39 22:02	05:33 21:59	06:35 19:45			07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 19:08 (PrRR3)	04:25 21:15	04:40 22:03	05:37 21:58	06:37 19:43			07:38 18:23	07:44 16:11	08:38 15:36
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	05:05 19:34 (PrRR3)	04:25 21:17	04:42 22:03	05:37 21:57	06:39 19:40			07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	05:03 19:08 (PrRR3)	04:24 21:19	04:43 22:04	05:39 21:55	06:41 19:37			07:42 18:17	07:48 16:07	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 19:09 (PrRR3)	04:24 21:21	04:44 22:05	05:41 21:54	06:43 19:34			07:44 18:15	07:50 16:06	08:41 15:36
16	08:38 16:10	07:40 17:17	06:29 18:17	06:07 20:22	04:59 19:31 (PrRR3)	04:24 21:23	04:46 22:05	05:43 21:53	06:45 19:32			07:46 18:12	07:53 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 17:52 (Pr3a)	04:57 20:24	04:23 19:30 (PrRR3)	04:47 21:25	05:45 20:50	06:47 19:29			07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 18:22	06:24 17:36 (Pr3a)	06:02 20:26	04:55 19:10 (PrRR3)	04:23 21:23	04:49 22:05	05:47 21:50	06:49 19:26	6	18:28 (Pr3a) 18:34 (Pr3a)	07:50 18:07	07:57 16:00	08:44 15:36
19	08:34 16:16	07:33 17:23	06:21 18:24	06:00 17:55 (Pr3a)	04:53 20:28	04:23 19:27 (PrRR3)	04:51 21:29	05:49 20:45	06:51 19:24	11	18:25 (Pr3a) 18:36 (Pr3a)	07:52 18:05	07:59 15:59	08:45 15:36
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 17:36 (Pr3a)	04:51 20:30	04:23 22:07	04:52 21:47	05:51 20:42	06:53 19:21	14	18:23 (Pr3a) 18:37 (Pr3a)	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 17:54 (Pr3a)	04:50 20:32	04:23 21:32	04:54 22:07	05:53 21:45	06:55 19:18	17	18:21 (Pr3a) 18:38 (Pr3a)	07:57 18:00	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 17:36 (Pr3a)	04:48 20:34	04:24 21:34	04:56 22:08	05:55 21:44	06:57 19:16	18	18:20 (Pr3a) 18:38 (Pr3a)	07:59 17:57	08:05 15:54	08:47 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 17:53 (Pr3a)	04:46 20:36	04:24 21:36	04:57 22:08	05:57 21:42	06:59 19:11	18	18:20 (Pr3a) 18:38 (Pr3a)	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:34	06:08 18:34	05:47 17:38 (Pr3a)	04:45 20:39	04:24 21:38	04:59 22:08	05:59 21:40	06:59 19:16	11	19:15 (PrRR3) 19:31 (PrRR3)	07:01 19:10	08:03 17:53	08:09 15:51
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 17:40 (Pr3a)	04:43 20:41	04:25 21:39	05:01 22:08	06:01 21:30	06:59 19:32 (PrRR3)	16	19:14 (PrRR3) 19:32 (PrRR3)	07:03 19:08	08:11 16:50	08:48 15:50
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	04:41 21:41	04:25 22:08	05:03 21:37	06:03 20:27	06:59 19:11 (PrRR3)	21	19:12 (PrRR3) 19:32 (PrRR3)	07:05 19:05	08:13 18:34	08:48 16:48
27	08:21 16:32	07:14 17:41	06:00 18:40	05:40 20:45	04:40 21:42	04:26 22:08	05:04 21:35	06:05 20:25	06:59 19:10 (PrRR3)	23	19:10 (PrRR3) 19:33 (PrRR3)	07:07 19:02	08:15 16:45	08:48 15:47
28	08:20 16:34	07:11 17:43	05:57 18:42	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	06:59 19:09 (PrRR3)	24	19:09 (PrRR3) 19:33 (PrRR3)	07:09 18:59	08:16 16:43	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	06:59 19:34 (PrRR3)	25	19:09 (PrRR3) 19:34 (PrRR3)	07:11 18:57	08:18 16:41	08:48 15:45
30	08:16 16:39		06:52 19:47	05:33 20:51	04:36 21:47	04:27 22:07	05:10 21:29	06:11 20:17	06:59 19:08 (PrRR3)	26	19:08 (PrRR3) 19:34 (PrRR3)	07:13 18:54	08:20 16:38	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14	06:59 19:08 (PrRR3)	26	19:08 (PrRR3) 19:34 (PrRR3)		07:18 16:36	08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384		324	248	217	
Total, worst case			159		349				190		324			
Sun reduction			0,39		0,44				0,52		0,43			
Oper. time red.			1,00		1,00				1,00		1,00			
Wind dir. red.			1,00		1,00				1,00		1,00			
Total reduction			0,39		0,44				0,52		0,43			
Total, real			62		154				99		140			

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Mikili - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (474)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:25	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Mozuli - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (418)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	January	February	March	April	May	June
1	08:48	08:13	07:09	16:28 (DD3)	06:47	18:57 (O3)
	15:47	16:44	17:46	28	16:56 (DD3)	19:51
2	08:48	08:11	07:06	16:28 (DD3)	06:44	19:16 (O3)
	15:48	16:46	17:48	27	16:55 (DD3)	19:53
3	08:48	08:09	07:04	16:29 (DD3)	06:42	19:15 (O3)
	15:50	16:48	17:50	26	16:55 (DD3)	19:55
4	08:47	08:07	07:01	16:29 (DD3)	06:39	19:14 (O3)
	15:51	16:51	17:52	25	16:54 (DD3)	19:57
5	08:47	08:05	06:59	16:30 (DD3)	06:37	19:12 (O3)
	15:52	16:53	17:55	22	16:52 (DD3)	19:59
6	08:46	08:03	06:56	16:32 (DD3)	06:34	19:11 (O3)
	15:54	16:55	17:57	19	16:51 (DD3)	20:01
7	08:46	08:00	06:53	16:33 (DD3)	06:31	20:03
	15:55	16:57	17:59	16	16:49 (DD3)	20:04
8	08:45	07:58	06:51	16:36 (DD3)	06:29	20:05
	15:57	17:00	18:01	9	16:45 (DD3)	20:06
9	08:44	07:56	06:48	17:33 (DD1)	06:26	20:07
	15:58	17:02	18:03	2	17:35 (DD1)	20:08
10	08:44	07:54	06:46	17:29 (DD1)	06:23	20:09
	16:00	17:04	18:05	8	17:37 (DD1)	20:10
11	08:43	15:18 (P19.2b)	07:52	17:26 (DD1)	06:21	20:11
	16:02	3 15:21 (P19.2b)	18:07	13	17:39 (DD1)	20:12
12	08:42	15:18 (P19.2b)	07:50	17:26 (DD1)	06:18	20:13
	16:03	5 15:23 (P19.2b)	18:09	16	17:42 (DD1)	20:14
13	08:41	15:18 (P19.2b)	07:47	17:24 (DD1)	06:16	20:15
	16:05	8 15:26 (P19.2b)	18:12	19	17:43 (DD1)	20:16
14	08:40	15:17 (P19.2b)	07:45	17:23 (DD1)	06:13	20:17
	16:07	10 15:27 (P19.2b)	3 16:41 (O5)	21	17:44 (DD1)	20:18
15	08:39	15:17 (P19.2b)	07:43	17:23 (DD1)	06:10	20:19
	16:09	13 15:30 (P19.2b)	8 16:44 (O5)	21	17:44 (DD1)	20:20
16	08:38	15:16 (P19.2b)	07:41	17:23 (DD1)	06:08	20:21
	16:11	15 15:31 (P19.2b)	12 16:46 (O5)	21	17:44 (DD1)	20:22
17	08:36	15:17 (P19.2b)	07:38	17:22 (DD1)	06:05	20:23
	16:13	17 15:34 (P19.2b)	15 16:49 (O5)	21	17:43 (DD1)	20:24
18	08:35	15:16 (P19.2b)	07:36	17:23 (DD1)	06:03	20:25
	16:15	19 15:35 (P19.2b)	18 16:51 (O5)	20	17:43 (DD1)	20:26
19	08:34	15:17 (P19.2b)	07:33	17:24 (DD1)	06:00	20:27
	16:16	20 15:37 (P19.2b)	19 16:52 (O5)	17	17:41 (DD1)	20:28
20	08:32	15:17 (P19.2b)	07:31	17:24 (DD1)	05:58	20:29
	16:18	20 15:37 (P19.2b)	20 16:52 (DD3)	16	17:40 (DD1)	20:30
21	08:31	15:17 (P19.2b)	07:29	17:26 (DD1)	05:55	20:31
	16:20	20 15:37 (P19.2b)	21 16:54 (DD3)	11	17:37 (DD1)	20:32
22	08:30	15:18 (P19.2b)	07:26	17:30 (DD1)	05:53	20:33
	16:23	20 15:38 (P19.2b)	24 16:55 (DD3)	4	17:34 (DD1)	20:34
23	08:28	15:18 (P19.2b)	07:24	16:31 (DD3)	06:11	20:35
	16:25	20 15:38 (P19.2b)	25 16:56 (DD3)		20:37	20:36
24	08:26	15:18 (P19.2b)	07:21	16:29 (DD3)	06:08	20:37
	16:27	20 15:38 (P19.2b)	27 16:56 (DD3)		20:39	20:38
25	08:25	15:19 (P19.2b)	07:19	16:28 (DD3)	06:06	20:39
	16:29	19 15:38 (P19.2b)	28 16:56 (DD3)	5	18:04 (O3)	20:40
26	08:23	15:19 (P19.2b)	07:16	16:29 (DD3)	06:03	20:41
	16:31	18 15:37 (P19.2b)	28 16:57 (DD3)	10	18:11 (O3)	20:42
27	08:22	15:20 (P19.2b)	07:14	16:28 (DD3)	06:00	20:43
	16:33	17 15:37 (P19.2b)	28 16:56 (DD3)	13	18:12 (O3)	20:44
28	08:20	15:21 (P19.2b)	07:11	16:28 (DD3)	05:58	20:45
	16:35	15 15:36 (P19.2b)	29 16:57 (DD3)	16	18:15 (O3)	20:46
29	08:18	15:22 (P19.2b)		06:55	18:58 (O3)	20:47
	16:37	13 15:35 (P19.2b)		19	19:17 (O3)	20:48
30	08:16	15:24 (P19.2b)		06:52	18:57 (O3)	20:49
	16:40	10 15:34 (P19.2b)		19	19:16 (O3)	20:50
31	08:14	15:29 (P19.2b)		06:50	18:57 (O3)	20:51
	16:42	1 15:30 (P19.2b)		20	19:17 (O3)	20:52
Potential sun hours	236	266	366	426	507	528
Total, worst case	303	305	484	79		
Sun reduction	0,13	0,22	0,39	0,44		
Oper. time red.	1,00	1,00	1,00	1,00		
Wind dir. red.	1,00	1,00	1,00	1,00		
Total reduction	0,13	0,22	0,39	0,44		
Total, real	41	69	189	35		

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

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

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Mozuli - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (418)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December	
1	04:29	05:14	06:16	07:15	18:04 (DD1)	07:20	08:22 15:01 (P19.2b)
	22:06	21:26	20:12	18:52	18	18:22 (DD1)	16:35 15:44 2 15:03 (P19.2b)
2	04:30	05:16	06:18	07:17	18:05 (DD1)	07:23	08:23
	22:06	21:24	20:09	18:49	14	18:19 (DD1)	16:32 15:43
3	04:31	05:18	06:20	07:19	18:06 (DD1)	07:25	08:25
	22:05	21:21	20:07	18:47	10	18:16 (DD1)	16:30 15:42
4	04:32	05:20	06:22	07:22	18:08 (DD1)	07:27	08:27
	22:05	21:19	20:04	18:44	5	18:13 (DD1)	16:28 15:41
5	04:33	05:22	06:24	07:24	17:16 (DD3)	07:29	08:28
	22:04	21:17	20:01	18:41	3	17:19 (DD3)	16:26 15:41
6	04:34	05:24	06:26	07:26	17:11 (DD3)	07:31	08:30
	22:03	21:15	19:59	18:39	13	17:24 (DD3)	16:24 15:40
7	04:35	05:26	06:28	18:56 (O3)	07:28	17:08 (DD3)	07:33 08:31
	22:03	21:13	19:56	10 19:06 (O3)	18:36 18	17:26 (DD3)	16:22 15:39
8	04:36	05:28	06:30	18:53 (O3)	07:30	17:06 (DD3)	07:36 08:33
	22:02	21:11	19:54	14 19:07 (O3)	18:33 21	17:27 (DD3)	16:20 15:39
9	04:37	05:30	06:32	18:52 (O3)	07:32	17:05 (DD3)	07:38 08:34
	22:01	21:08	19:51	16 19:08 (O3)	18:31 24	17:29 (DD3)	16:18 15:38
10	04:38	05:32	06:34	18:50 (O3)	07:34	17:04 (DD3)	07:40 08:35
	22:00	21:06	19:48	18 19:08 (O3)	18:28 25	17:29 (DD3)	16:16 15:38
11	04:40	05:34	06:36	18:49 (O3)	07:36	17:03 (DD3)	07:42 15:00 (P19.2b) 08:37
	21:59	21:04	19:46	19 19:08 (O3)	18:26 26	17:29 (DD3)	16:14 3 15:03 (P19.2b) 15:37
12	04:41	05:36	06:38	18:48 (O3)	07:38	17:02 (DD3)	07:44 14:56 (P19.2b) 08:38
	21:58	21:02	19:43	20 19:08 (O3)	18:23 27	17:29 (DD3)	16:12 10 15:06 (P19.2b) 15:37
13	04:42	05:38	06:40	18:48 (O3)	07:40	17:01 (DD3)	07:46 14:54 (P19.2b) 08:39
	21:57	20:59	19:40	20 19:08 (O3)	18:20 28	17:29 (DD3)	16:10 13 15:07 (P19.2b) 15:37
14	04:44	05:40	06:42	18:48 (O3)	07:42	17:00 (DD3)	07:48 14:54 (P19.2b) 08:40
	21:55	20:57	19:38	19 19:07 (O3)	18:18 29	17:29 (DD3)	16:08 15 15:09 (P19.2b) 15:37
15	04:45	05:42	06:44	18:48 (O3)	07:44	17:01 (DD3)	07:51 14:53 (P19.2b) 08:41
	21:54	20:55	19:35	17 19:05 (O3)	18:15 28	17:29 (DD3)	16:06 17 15:10 (P19.2b) 15:37
16	04:47	05:44	06:46	18:49 (O3)	07:46	17:01 (DD3)	07:53 14:52 (P19.2b) 08:42
	21:53	20:52	19:32	13 19:02 (O3)	18:13 28	17:29 (DD3)	16:05 18 15:10 (P19.2b) 15:37
17	04:48	05:46	06:47	18:50 (O3)	07:48	17:01 (DD3)	07:55 14:53 (P19.2b) 08:43
	21:51	20:50	19:29	10 19:00 (O3)	18:10 27	17:28 (DD3)	16:03 19 15:12 (P19.2b) 15:37
18	04:50	05:48	06:49	18:51 (O3)	07:50	17:01 (DD3)	07:57 14:52 (P19.2b) 08:44
	21:50	20:47	19:27	6 18:57 (O3)	18:08 26	17:27 (DD3)	16:01 20 15:12 (P19.2b) 15:37
19	04:51	05:50	06:51	07:53	17:01 (DD3)	07:59	14:52 (P19.2b) 08:45
	21:49	20:45	19:24	18:05	25	17:26 (DD3)	16:00 20 15:12 (P19.2b) 15:37
20	04:53	05:52	06:53	07:55	17:03 (DD3)	08:01	14:53 (P19.2b) 08:45
	21:47	20:43	19:21	18:03	23	17:26 (DD3)	15:58 20 15:13 (P19.2b) 15:38
21	04:55	05:54	06:55	07:57	17:03 (DD3)	08:03	14:53 (P19.2b) 08:46
	21:45	20:40	19:19	18:00	21	17:24 (DD3)	15:56 20 15:13 (P19.2b) 15:38
22	04:56	05:56	06:57	18:12 (DD1)	07:59	17:02 (O5)	08:05 14:53 (P19.2b) 08:47
	21:44	20:38	19:16	10 18:22 (DD1)	17:58 20	17:22 (DD3)	15:55 20 15:13 (P19.2b) 15:38
23	04:58	05:58	06:59	18:09 (DD1)	08:01	17:03 (O5)	08:07 14:53 (P19.2b) 08:47
	21:42	20:35	19:13	15 18:24 (DD1)	17:56 20	17:23 (O5)	15:54 20 15:13 (P19.2b) 15:39
24	05:00	06:00	07:01	18:08 (DD1)	08:03	17:03 (O5)	08:09 14:54 (P19.2b) 08:47
	21:40	20:33	19:11	17 18:25 (DD1)	17:53 18	17:21 (O5)	15:52 19 15:13 (P19.2b) 15:40
25	05:02	06:02	07:03	18:06 (DD1)	07:05	16:04 (O5)	08:11 14:55 (P19.2b) 08:48
	21:39	20:30	19:08	19 18:25 (DD1)	16:51 14	16:18 (O5)	15:51 17 15:12 (P19.2b) 15:40
26	05:03	06:04	07:05	18:05 (DD1)	07:07	16:05 (O5)	08:13 14:55 (P19.2b) 08:48
	21:37	20:27	19:05	21 18:26 (DD1)	16:48 11	16:16 (O5)	15:50 15 15:10 (P19.2b) 15:41
27	05:05	06:06	07:07	18:05 (DD1)	07:10	16:06 (O5)	08:15 14:56 (P19.2b) 08:48
	21:35	20:25	19:03	21 18:26 (DD1)	16:46 7	16:13 (O5)	15:48 13 15:09 (P19.2b) 15:42
28	05:07	06:08	07:09	18:04 (DD1)	07:12	16:08 (O5)	08:16 14:57 (P19.2b) 08:48
	21:33	20:22	19:00	21 18:25 (DD1)	16:44 2	16:10 (O5)	15:47 10 15:07 (P19.2b) 15:43
29	05:09	06:10	07:11	18:04 (DD1)	07:14	08:18	14:58 (P19.2b) 08:48
	21:31	20:20	18:57	21 18:25 (DD1)	16:41 15:46	8	15:06 (P19.2b) 15:44
30	05:11	06:12	07:13	18:04 (DD1)	07:16	08:20	14:59 (P19.2b) 08:48
	21:29	20:17	18:55	20 18:24 (DD1)	16:39 15:45	6	15:05 (P19.2b) 15:45
31	05:13	06:14		07:18			08:48
	21:28	20:15		16:37			15:46
Potential sun hours	528	469	384	324	248	217	
Total, worst case			347	531	303	2	
Sun reduction			0,43	0,29	0,08	0,08	
Oper. time red.			1,00	1,00	1,00	1,00	
Wind dir. red.			1,00	1,00	1,00	1,00	
Total reduction			0,43	0,29	0,08	0,08	
Total, real			150	154	23	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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Makonišs - Shadow Receptor:  $1,0 \times 1,0$  Azimuth:  $3,1^\circ$  Slope:  $90,0^\circ$  (587)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:31	04:35	04:29	05:14	06:16	07:15	07:20	08:22
	15:47	16:44	17:46	19:51	20:53	21:50	22:06	21:25	20:12	18:52	16:34	15:44
2	08:48	08:10	07:06	06:44	05:29	04:34	04:30	05:16	06:18	07:17	07:23	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:43
3	08:48	08:09	07:04	06:42	05:26	04:33	04:31	05:18	06:20	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:46	16:30	15:42
4	08:47	08:07	07:01	06:39	05:24	04:32	04:32	05:20	06:22	07:21	07:27	08:27
	15:51	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:41
5	08:47	08:05	06:58	06:36	05:22	04:31	04:33	05:22	06:24	07:23	07:29	08:28
	15:52	16:53	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:26	15:40
6	08:46	08:02	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:01	21:03	21:56	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:00	06:53	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:33	08:31
	15:55	16:57	17:59	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:22	15:39
8	08:45	07:58	06:51	06:28	05:15	04:28	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	16:59	18:01	20:06	21:07	21:59	22:02	21:11	19:53	18:33	16:20	15:39
9	08:44	07:56	06:48	06:26	05:13	04:27	04:37	05:30	06:32	07:32	07:38	08:34
	15:58	17:02	18:03	20:08	21:09	22:00	22:01	21:08	19:51	18:31	16:18	15:38
10	08:44	07:54	06:45	06:23	05:11	04:27	04:38	05:32	06:34	07:34	07:40	08:35
	16:00	17:04	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:09	04:26	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:26	16:14	15:37
12	08:42	07:50	06:40	06:18	05:07	04:26	04:41	05:36	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:02	19:43	18:23	16:12	15:37
13	08:41	07:47	06:38	06:15	05:05	04:25	04:42	05:38	06:39	07:40	07:46	08:39
	16:05	17:11	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:10	15:37
14	08:40	07:45	06:35	06:13	05:03	04:25	04:44	05:40	06:41	07:42	07:48	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:37	18:18	16:08	15:37
15	08:39	07:43	06:32	06:10	05:01	04:25	04:45	05:42	06:43	07:44	07:50	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:37
16	08:38	07:40	06:30	06:08	04:59	04:24	04:47	05:44	06:45	07:46	07:53	08:42
	16:11	17:17	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:04	15:37
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:46	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:03	15:37
18	08:35	07:36	06:24	06:03	04:56	04:24	04:50	05:48	06:49	07:50	07:57	08:44
	16:14	17:22	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08	16:01	15:37
19	08:34	07:33	06:22	06:00	04:54	04:24	04:51	05:50	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:58	04:52	04:24	04:53	05:52	06:53	07:55	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:03	15:58	15:37
21	08:31	07:29	06:16	05:55	04:50	04:24	04:55	05:54	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:19	18:00	15:56	15:38
22	08:29	07:26	06:14	05:53	04:49	04:24	04:56	05:56	06:57	07:59	08:05	08:46
	16:22	17:31	18:30	20:35	21:34	22:08	21:44	20:37	19:16	17:58	15:55	15:38
23	08:28	07:24	06:11	05:50	04:47	04:25	04:58	05:58	06:59	08:01	08:07	08:47
	16:24	17:33	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:39
24	08:26	07:21	06:08	05:48	04:46	04:25	05:00	06:00	07:01	08:03	08:09	08:47
	16:27	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:11	17:53	15:52	15:39
25	08:25	07:19	06:06	05:45	04:44	04:25	05:01	06:02	07:03	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:40
26	08:23	07:16	06:03	05:43	04:43	04:26	05:03	06:04	07:05	08:07	08:13	08:48
	16:31	17:39	18:39	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:41
27	08:21	07:14	06:00	05:40	04:41	04:26	05:05	06:06	07:07	08:09	08:15	08:48
	16:33	17:41	18:41	20:45	21:42	22:08	21:35	20:25	19:02	16:46	15:48	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:09	08:12	08:16	08:48
	16:35	17:44	18:43	20:47	21:44	22:07	21:33	20:22	19:00	16:44	15:47	15:42
29	08:18		06:55	05:36	04:38	04:27	05:09	06:10	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:46	15:43
30	08:16		06:52	05:33	04:37	04:28	05:11	06:12	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:45	15:44
31	08:14		06:50		04:36		05:12	06:14		07:18		08:48
	16:42		19:49		21:49		21:27	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Makoni - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (417)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:14 21:25	06:16 20:12	07:15 18:52	07:20 16:34	08:22 15:44
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:16 21:23	06:18 20:09	07:17 18:49	07:23 16:32	08:23 15:43
3	08:48 15:49	08:09 16:48	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:18 21:21	06:20 20:07	07:19 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:53	06:59 17:54	06:36 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:01	07:23 18:41	07:29 16:26	08:28 15:40
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:01	05:20 21:03	04:30 21:56	04:34 22:03	05:24 21:15	06:26 20:01	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:18 21:05	04:29 21:58	04:35 22:03	05:26 21:13	06:28 20:01	07:28 18:36	07:33 16:22	08:31 15:39
8	08:45 15:57	07:58 16:59	06:51 18:01	06:29 20:06	05:15 21:07	04:28 21:59	04:36 22:02	05:28 21:11	06:30 20:04	07:30 18:33	07:36 16:20	08:33 15:39
9	08:44 15:58	07:56 17:02	06:48 18:03	06:26 20:08	05:13 21:09	04:27 22:00	04:37 22:01	05:30 21:08	06:32 20:01	07:32 18:31	07:38 16:18	08:34 15:38
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:11	04:27 22:01	04:38 22:00	05:32 21:06	06:34 20:04	07:34 18:28	07:40 16:16	08:35 15:38
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:13	04:26 22:02	04:40 21:59	05:34 21:04	06:36 20:01	07:36 18:26	07:42 16:14	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:26 22:02	04:41 21:58	05:36 21:02	06:38 20:01	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:47 17:11	06:38 18:12	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:57	05:38 20:59	06:39 20:01	07:40 18:20	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:41 20:01	07:42 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:25 22:05	04:45 21:54	05:42 20:55	06:43 20:01	07:44 18:15	07:50 16:06	08:41 15:37
16	08:38 16:11	07:40 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:05	04:47 21:53	05:44 20:52	06:45 20:01	07:46 18:13	07:53 16:04	08:42 15:37
17	08:36 16:12	07:38 17:20	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:46 20:50	06:47 20:01	07:48 18:10	07:55 16:03	08:43 15:37
18	08:35 16:14	07:36 17:22	06:24 18:22	06:03 20:26	04:56 21:27	04:24 22:06	04:50 21:50	05:48 20:47	06:49 20:01	07:50 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:48	05:50 20:45	06:51 20:01	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:58 20:30	04:52 21:30	04:24 22:07	04:53 21:47	05:52 20:42	06:53 20:01	07:55 18:03	08:01 15:58	08:45 15:37
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:55 21:45	05:54 20:40	06:55 20:01	07:57 18:00	08:03 15:56	08:46 15:38
22	08:30 16:22	07:26 17:31	06:14 18:30	05:53 20:35	04:49 21:34	04:24 22:08	04:56 21:44	05:56 20:37	06:57 20:01	07:59 17:58	08:05 15:55	08:46 15:38
23	08:28 16:24	07:24 17:33	06:11 18:32	05:50 20:37	04:47 21:36	04:25 22:08	04:58 21:42	05:58 20:35	06:59 20:01	08:01 17:55	08:07 15:53	08:47 15:39
24	08:26 16:27	07:21 17:35	06:08 18:34	05:48 20:39	04:46 21:37	04:25 22:08	05:00 21:40	06:00 20:32	07:01 20:01	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:29	07:19 17:37	06:06 18:37	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:02 20:30	07:03 20:01	08:05 17:51	08:11 15:51	08:48 15:40
26	08:23 16:31	07:16 17:39	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:03 21:37	06:04 20:27	07:05 20:01	08:07 17:48	08:13 15:49	08:48 15:41
27	08:22 16:33	07:14 17:42	06:00 18:41	05:40 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:06 20:25	07:07 20:01	08:10 17:46	08:15 15:48	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:09 20:01	08:12 17:44	08:16 15:47	08:48 15:43
29	08:18 16:37		06:55 19:45	05:36 20:49	04:38 21:46	04:27 22:07	05:09 21:31	06:10 20:20	07:11 18:57	08:14 17:41	08:18 15:46	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:11 21:29	06:12 20:17	07:13 18:54	08:16 17:39	08:20 15:45	08:48 15:44
31	08:14 16:42		06:50 19:49		04:36 21:49		05:12 21:27	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Nadež da - Shadow Receptor:  $1,0 \times 1,0$  Azimuth:  $3,1^\circ$  Slope:  $90,0^\circ$  (532)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Oriš u kapseta - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (522)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Ozolaine - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (590)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:13 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:14 21:26	06:16 20:12	07:15 18:52	07:20 16:35	08:22 15:44
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:16 21:24	06:18 20:09	07:17 18:49	07:23 16:32	08:23 15:43
3	08:48 15:49	08:09 16:48	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:18 21:21	06:20 20:07	07:19 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:53	06:59 17:55	06:36 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:01	07:24 18:41	07:29 16:26	08:28 15:40
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:01	05:20 21:03	04:30 21:57	04:34 22:03	05:24 21:15	06:26 20:01	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:04	05:18 21:05	04:29 21:58	04:35 22:03	05:26 21:13	06:28 20:01	07:28 18:36	07:33 16:22	08:31 15:39
8	08:45 15:57	07:58 16:59	06:51 18:01	06:29 20:06	05:15 21:07	04:28 21:59	04:36 22:02	05:28 21:11	06:30 20:04	07:30 18:33	07:36 16:20	08:33 15:39
9	08:44 15:58	07:56 17:02	06:48 18:03	06:26 20:08	05:13 21:09	04:27 22:00	04:37 22:01	05:30 21:08	06:32 20:01	07:32 18:31	07:38 16:18	08:34 15:38
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:11	04:27 22:01	04:38 22:00	05:32 21:06	06:34 20:04	07:34 18:28	07:40 16:16	08:35 15:38
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:13	04:26 22:02	04:40 21:59	05:34 21:04	06:36 20:01	07:36 18:26	07:42 16:14	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:26 22:03	04:41 21:58	05:36 21:02	06:38 20:01	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:47 17:11	06:38 18:12	06:16 20:16	05:05 21:17	04:25 22:03	04:42 21:57	05:38 20:59	06:40 20:01	07:40 18:20	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:42 20:01	07:42 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:25 22:05	04:45 21:54	05:42 20:55	06:43 20:01	07:44 18:15	07:51 16:06	08:41 15:37
16	08:38 16:11	07:41 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:05	04:47 21:53	05:44 20:52	06:45 20:01	07:46 18:13	07:53 16:04	08:42 15:37
17	08:36 16:12	07:38 17:20	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:46 20:50	06:47 20:01	07:48 18:10	07:55 16:03	08:43 15:37
18	08:35 16:14	07:36 17:22	06:24 18:22	06:03 20:26	04:56 21:27	04:24 22:06	04:50 21:50	05:48 20:47	06:49 20:01	07:50 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:49	05:50 20:45	06:51 20:01	07:53 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:58 20:30	04:52 21:31	04:24 22:07	04:53 21:47	05:52 20:43	06:53 20:01	07:55 18:03	08:01 15:58	08:45 15:37
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:33	04:50 21:32	04:24 22:07	04:55 21:45	05:54 20:40	06:55 20:01	07:57 18:00	08:03 15:56	08:46 15:38
22	08:30 16:22	07:26 17:31	06:14 18:30	05:53 20:35	04:49 21:34	04:24 22:08	04:56 21:44	05:56 20:38	06:57 20:01	07:59 17:58	08:05 15:55	08:47 15:38
23	08:28 16:24	07:24 17:33	06:11 18:32	05:50 20:37	04:47 21:36	04:25 22:08	04:58 21:42	05:58 20:35	06:59 20:01	08:01 17:55	08:07 15:53	08:47 15:39
24	08:27 16:27	07:21 17:35	06:08 18:35	05:48 20:39	04:46 21:38	04:25 22:08	05:00 21:41	06:00 20:33	07:01 20:01	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:29	07:19 17:37	06:06 18:37	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:02 20:30	07:03 20:01	08:05 17:51	08:11 15:51	08:48 15:40
26	08:23 16:31	07:16 17:39	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:03 21:37	06:04 20:27	07:05 20:01	08:07 17:48	08:13 15:49	08:48 15:41
27	08:22 16:33	07:14 17:42	06:00 18:41	05:41 20:45	04:41 21:43	04:26 22:08	05:05 21:35	06:06 20:25	07:07 20:01	08:09 17:46	08:15 15:48	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:09 20:01	08:12 17:44	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:36 20:49	04:38 21:46	04:27 22:07	05:09 21:31	06:10 20:20	07:11 18:57	08:14 17:41	08:18 15:46	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:11 21:30	06:12 20:17	07:13 18:55	08:16 17:39	08:20 15:45	08:49 15:44
31	08:14 16:42		06:50 19:49		04:36 21:49		05:12 21:28	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A  
Assumptions for shadow calculations

Shadow receptor: OŠ i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (420)  
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	January	February	March	April	May	June
1	08:48 15:47	08:13 16:44	07:09 17:46	06:47 19:51	05:31 20:53	18:44 (JV1) 21:50
2	08:48 15:48	08:11 16:46	07:06 17:48	06:45 19:53	05:29 20:55	18:46 (JV1) 21:51
3	08:48 15:50	08:09 16:48	07:04 17:50	06:42 19:55	05:27 20:57	18:49 (JV1) 21:53
4	08:47 15:51	08:07 16:51	07:01 17:53	06:39 19:57	05:24 20:59	19:03 (JV1) 21:53
5	08:47 15:52	08:05 16:53	06:59 17:55	06:37 19:59	05:22 21:01	20:23 (O1.b) 21:55
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:02	05:20 21:03	20:23 (O1.b) 21:56
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:04	05:18 21:05	20:23 (O1.b) 21:58
8	08:45 15:57	07:58 17:00	06:51 18:01	06:29 20:06	05:16 21:07	20:24 (O1.b) 21:59
9	08:44 15:59	07:56 17:02	06:48 18:03	06:26 20:08	05:14 21:09	20:24 (O1.b) 22:00
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:12 21:11	20:26 (O1.b) 22:01
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:13	20:26 (O1.b) 22:02
12	08:42 16:04	07:50 17:09	06:40 18:10	06:18 20:14	05:07 21:15	20:27 (O1.b) 22:02
13	08:41 16:05	07:47 17:11	06:38 18:12	06:16 20:16	05:05 21:17	20:27 (O1.b) 22:03
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:19	20:28 (O1.b) 22:04
15	08:39 16:09	07:43 17:15	06:32 18:16	06:11 20:20	05:02 21:21	20:28 (O1.b) 22:05
16	08:38 16:11	07:41 17:17	06:30 18:18	06:08 20:22	05:00 21:23	20:29 (O1.b) 22:05
17	08:36 16:13	07:38 17:20	06:27 18:20	06:05 20:24	04:58 21:25	20:29 (O1.b) 22:06
18	08:35 16:15	07:36 17:22	06:25 18:22	06:03 20:26	04:56 21:27	20:30 (O1.b) 22:06
19	08:34 16:17	07:34 17:24	06:22 18:24	06:00 20:28	04:54 21:29	20:30 (O1.b) 22:07
20	08:32 16:19	07:31 17:26	06:19 18:26	05:58 20:30	04:52 21:31	20:30 (O1.b) 22:07
21	08:31 16:21	07:29 17:29	06:17 18:28	05:55 20:33	04:51 21:32	20:31 (O1.b) 22:07
22	08:30 16:23	07:26 17:31	06:14 18:30	05:53 20:35	04:49 21:34	20:31 (O1.b) 22:08
23	08:28 16:25	07:24 17:33	06:11 18:33	05:50 20:37	04:47 21:36	20:31 (O1.b) 22:08
24	08:26 16:27	07:21 17:35	06:09 18:35	05:48 20:39	04:46 21:38	20:32 (O1.b) 22:08
25	08:25 16:29	07:19 17:37	06:06 18:37	05:46 20:41	04:44 21:39	20:31 (O1.b) 22:08
26	08:23 16:31	07:16 17:40	06:03 18:39	05:43 20:43	04:43 21:41	20:31 (O1.b) 22:08
27	08:22 16:33	07:14 17:42	06:01 18:41	05:41 20:45	04:41 21:42	20:31 (O1.b) 22:08
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	20:31 (O1.b) 22:07
29	08:18 16:37		05:55 19:45	05:36 20:49	04:39 21:46	20:31 (O1.b) 22:07
30	08:16 16:40		05:53 19:47	05:34 20:51	04:37 21:47	20:31 (O1.b) 22:07
31	08:14 16:42		05:50 19:49		04:36 21:49	20:20 (O1.b) 22:04 (O1.b)
Potential sun hours	236	266	366	426	507	528
Total, worst case				1033	606	459
Sun reduction				0,44	0,56	0,57
Oper. time red.				1,00	1,00	1,00
Wind dir. red.				1,00	1,00	1,00
Total reduction				0,44	0,56	0,57
Total, real				456	341	261

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: OŠ i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (420)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July			August			September			October	November	December
1	04:29	20:30 (O1.b)	05:15	20:32 (O1.b)	06:16	18:38 (JV1)	07:16	07:20	08:22			
	22:06	16	20:46 (O1.b)	21:26	18	20:50 (O1.b)	20:12	40	19:18 (JV1)	18:52	16:35	15:44
2	04:30	20:30 (O1.b)	05:16	20:34 (O1.b)	06:18	18:38 (JV1)	07:18		08:23			
	22:06	16	20:46 (O1.b)	21:24	15	20:49 (O1.b)	20:09	39	19:17 (JV1)	18:49	16:32	15:43
3	04:31	20:30 (O1.b)	05:18	20:36 (O1.b)	06:20	18:39 (JV1)	07:20		08:25			
	22:05	17	20:47 (O1.b)	21:21	11	20:47 (O1.b)	20:07	37	19:16 (JV1)	18:47	16:30	15:42
4	04:32	20:30 (O1.b)	05:20	20:39 (O1.b)	06:22	18:40 (JV1)	07:22		08:27			
	22:05	18	20:48 (O1.b)	21:19	3	20:42 (O1.b)	20:04	35	19:15 (JV1)	18:44	16:28	15:41
5	04:33	20:30 (O1.b)	05:22			06:24	18:41 (JV1)	07:24	07:29	08:28		
	22:04	19	20:49 (O1.b)	21:17		20:02	32	19:13 (JV1)	18:41	16:26	15:41	
6	04:34	20:29 (O1.b)	05:24			06:26	18:42 (JV1)	07:26	07:31	08:30		
	22:03	20	20:49 (O1.b)	21:15		19:59	30	19:12 (JV1)	18:39	16:24	15:40	
7	04:35	20:29 (O1.b)	05:26			06:28	18:44 (JV1)	07:28	07:33	08:31		
	22:03	21	20:50 (O1.b)	21:13		19:56	25	19:09 (JV1)	18:36	16:22	15:39	
8	04:36	20:29 (O1.b)	05:28			06:30	18:46 (JV1)	07:30	07:36	08:33		
	22:02	21	20:50 (O1.b)	21:11		19:54	21	19:07 (JV1)	18:34	16:20	15:39	
9	04:37	20:29 (O1.b)	05:30	19:01 (JV1)	06:32	18:49 (JV1)	07:32	07:38	08:34			
	22:01	22	20:51 (O1.b)	21:08	7	19:08 (JV1)	19:51	14	19:03 (JV1)	18:31	16:18	15:38
10	04:39	20:28 (O1.b)	05:32			18:57 (JV1)	06:34		07:34	07:40	08:35	
	22:00	23	20:51 (O1.b)	21:06	15	19:12 (JV1)	19:48		18:28	16:16	15:38	
11	04:40	20:28 (O1.b)	05:34			18:54 (JV1)	06:36		07:36	07:42	08:37	
	21:59	24	20:52 (O1.b)	21:04	21	19:15 (JV1)	19:46		18:26	16:14	15:38	
12	04:41	20:28 (O1.b)	05:36			18:52 (JV1)	06:38		07:38	07:44	08:38	
	21:58	25	20:53 (O1.b)	21:02	25	19:17 (JV1)	19:43		18:23	16:12	15:37	
13	04:43	20:28 (O1.b)	05:38			18:50 (JV1)	06:40		07:40	07:46	08:39	
	21:57	25	20:53 (O1.b)	20:59	28	19:18 (JV1)	19:40		18:21	16:10	15:37	
14	04:44	20:27 (O1.b)	05:40			18:49 (JV1)	06:42		07:42	07:48	08:40	
	21:55	26	20:53 (O1.b)	20:57	31	19:20 (JV1)	19:38		18:18	16:08	15:37	
15	04:45	20:27 (O1.b)	05:42			18:46 (JV1)	06:44		07:44	07:51	08:41	
	21:54	26	20:53 (O1.b)	20:55	34	19:20 (JV1)	19:35		18:15	16:06	15:37	
16	04:47	20:28 (O1.b)	05:44			18:45 (JV1)	06:46		07:46	07:53	08:42	
	21:53	26	20:54 (O1.b)	20:52	36	19:21 (JV1)	19:32		18:13	16:05	15:37	
17	04:48	20:27 (O1.b)	05:46			18:44 (JV1)	06:48		07:48	07:55	08:43	
	21:51	27	20:54 (O1.b)	20:50	37	19:21 (JV1)	19:30		18:10	16:03	15:37	
18	04:50	20:28 (O1.b)	05:48			18:43 (JV1)	06:50		07:50	07:57	08:44	
	21:50	27	20:55 (O1.b)	20:47	39	19:22 (JV1)	19:27		18:08	16:01	15:37	
19	04:52	20:27 (O1.b)	05:50			18:42 (JV1)	06:52		07:53	07:59	08:45	
	21:49	28	20:55 (O1.b)	20:45	41	19:23 (JV1)	19:24		18:05	16:00	15:37	
20	04:53	20:28 (O1.b)	05:52			18:42 (JV1)	06:54		07:55	08:01	08:45	
	21:47	27	20:55 (O1.b)	20:43	41	19:23 (JV1)	19:21		18:03	15:58	15:38	
21	04:55	20:27 (O1.b)	05:54			18:41 (JV1)	06:56		07:57	08:03	08:46	
	21:45	28	20:55 (O1.b)	20:40	42	19:23 (JV1)	19:19		18:01	15:57	15:38	
22	04:57	20:28 (O1.b)	05:56			18:40 (JV1)	06:57		07:59	08:05	08:47	
	21:44	27	20:55 (O1.b)	20:38	44	19:24 (JV1)	19:16		17:58	15:55	15:39	
23	04:58	20:27 (O1.b)	05:58			18:39 (JV1)	06:59		08:01	08:07	08:47	
	21:42	28	20:55 (O1.b)	20:35	44	19:23 (JV1)	19:13		17:56	15:54	15:39	
24	05:00	20:28 (O1.b)	06:00			18:39 (JV1)	07:01		08:03	08:09	08:47	
	21:40	27	20:55 (O1.b)	20:33	44	19:23 (JV1)	19:11		17:53	15:52	15:40	
25	05:02	20:28 (O1.b)	06:02			18:38 (JV1)	07:03		07:05	08:11	08:48	
	21:39	26	20:54 (O1.b)	20:30	45	19:23 (JV1)	19:08		16:51	15:51	15:40	
26	05:04	20:28 (O1.b)	06:04			18:38 (JV1)	07:05		07:08	08:13	08:48	
	21:37	26	20:54 (O1.b)	20:28	45	19:23 (JV1)	19:05		16:48	15:50	15:41	
27	05:05	20:29 (O1.b)	06:06			18:38 (JV1)	07:07		07:10	08:15	08:48	
	21:35	25	20:54 (O1.b)	20:25	44	19:22 (JV1)	19:03		16:46	15:48	15:42	
28	05:07	20:29 (O1.b)	06:08			18:38 (JV1)	07:09		07:12	08:16	08:48	
	21:33	24	20:53 (O1.b)	20:22	44	19:22 (JV1)	19:00		16:44	15:47	15:43	
29	05:09	20:30 (O1.b)	06:10			18:38 (JV1)	07:11		07:14	08:18	08:48	
	21:31	23	20:53 (O1.b)	20:20	43	19:21 (JV1)	18:57		16:41	15:46	15:44	
30	05:11	20:31 (O1.b)	06:12			18:38 (JV1)	07:13		07:16	08:20	08:48	
	21:29	22	20:53 (O1.b)	20:17	43	19:21 (JV1)	18:55		16:39	15:45	15:45	
31	05:13	20:31 (O1.b)	06:14			18:37 (JV1)			07:18		08:48	
	21:28	20	20:51 (O1.b)	20:15	42	19:19 (JV1)			16:37		15:46	
Potential sun hours	528		469			384			324	248	217	
Total, worst case	730		882			273						
Sun reduction	0,47		0,52			0,43						
Oper. time red.	1,00		1,00			1,00						
Wind dir. red.	1,00		1,00			1,00						
Total reduction	0,47		0,52			0,43						
Total, real	344		461			118						

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Oš mala - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (458)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:49	08:13	07:09	06:47	05:31	04:34	04:28	05:14	06:16	07:15	07:21	08:22
	15:46	16:43	17:46	19:51	20:53	21:51	22:07	21:26	20:12	18:52	16:34	15:43
2	08:49	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:18	07:17	07:23	08:24
	15:48	16:46	17:48	19:53	20:56	21:52	22:07	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:04	06:42	05:26	04:32	04:30	05:18	06:20	07:19	07:25	08:26
	15:49	16:48	17:50	19:55	20:58	21:53	22:06	21:22	20:07	18:46	16:30	15:41
4	08:48	08:07	07:01	06:39	05:24	04:31	04:31	05:20	06:22	07:22	07:27	08:27
	15:50	16:50	17:52	19:57	21:00	21:55	22:05	21:20	20:04	18:44	16:28	15:41
5	08:47	08:05	06:59	06:36	05:22	04:30	04:32	05:22	06:24	07:24	07:29	08:29
	15:52	16:52	17:54	19:59	21:02	21:56	22:05	21:18	20:02	18:41	16:26	15:40
6	08:47	08:03	06:56	06:34	05:19	04:29	04:33	05:24	06:25	07:26	07:32	08:30
	15:53	16:55	17:57	20:02	21:04	21:57	22:04	21:15	19:59	18:39	16:23	15:39
7	08:46	08:01	06:53	06:31	05:17	04:28	04:34	05:26	06:27	07:28	07:34	08:32
	15:55	16:57	17:59	20:04	21:06	21:58	22:03	21:13	19:56	18:36	16:21	15:39
8	08:46	07:59	06:51	06:28	05:15	04:28	04:35	05:28	06:29	07:30	07:36	08:33
	15:56	16:59	18:01	20:06	21:08	21:59	22:02	21:11	19:54	18:33	16:19	15:38
9	08:45	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:32	07:38	08:35
	15:58	17:01	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:31	16:17	15:38
10	08:44	07:54	06:46	06:23	05:11	04:26	04:38	05:31	06:33	07:34	07:40	08:36
	15:59	17:04	18:05	20:10	21:12	22:01	22:00	21:07	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:21	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:46	18:25	16:13	15:37
12	08:42	07:50	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:11	15:37
13	08:41	07:48	06:38	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:47	08:40
	16:05	17:10	18:11	20:16	21:18	22:04	21:57	21:00	19:40	18:20	16:10	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:49	08:41
	16:06	17:13	18:14	20:18	21:20	22:05	21:56	20:57	19:38	18:18	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:51	08:42
	16:08	17:15	18:16	20:20	21:22	22:05	21:55	20:55	19:35	18:15	16:06	15:36
16	08:38	07:41	06:30	06:08	04:59	04:24	04:46	05:43	06:45	07:46	07:53	08:43
	16:10	17:17	18:18	20:22	21:24	22:06	21:53	20:52	19:32	18:13	16:04	15:36
17	08:37	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:44
	16:12	17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:36	07:36	06:24	06:02	04:55	04:24	04:49	05:47	06:49	07:51	07:57	08:44
	16:14	17:22	18:22	20:26	21:27	22:07	21:50	20:48	19:27	18:08	16:01	15:36
19	08:34	07:34	06:22	06:00	04:53	04:23	04:51	05:49	06:51	07:53	07:59	08:45
	16:16	17:24	18:24	20:29	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:37
20	08:33	07:31	06:19	05:57	04:52	04:24	04:52	05:51	06:53	07:55	08:01	08:46
	16:18	17:26	18:26	20:31	21:31	22:08	21:47	20:43	19:21	18:03	15:57	15:37
21	08:31	07:29	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:47
	16:20	17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:19	18:00	15:56	15:37
22	08:30	07:26	06:14	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:35	21:35	22:08	21:44	20:38	19:16	17:58	15:54	15:38
23	08:28	07:24	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:48
	16:24	17:33	18:32	20:37	21:36	22:08	21:43	20:35	19:13	17:55	15:53	15:38
24	08:27	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:35	18:35	20:39	21:38	22:08	21:41	20:33	19:11	17:53	15:52	15:39
25	08:25	07:19	06:06	05:45	04:44	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:37	20:41	21:40	22:08	21:39	20:30	19:08	17:50	15:50	15:40
26	08:24	07:16	06:03	05:43	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:49
	16:30	17:39	18:39	20:43	21:41	22:08	21:37	20:28	19:05	16:48	15:49	15:40
27	08:22	07:14	06:00	05:40	04:41	04:26	05:05	06:06	07:07	08:09	08:15	08:49
	16:33	17:41	18:41	20:45	21:43	22:08	21:36	20:25	19:02	16:46	15:48	15:41
28	08:20	07:11	05:58	05:38	04:39	04:26	05:06	06:08	07:09	08:12	08:17	08:49
	16:35	17:44	18:43	20:47	21:45	22:08	21:34	20:23	19:00	16:43	15:47	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:10	07:11	08:14	08:19	08:49
	16:37		19:45	20:49	21:46	22:08	21:32	20:20	18:57	16:41	15:45	15:43
30	08:17		06:52	05:33	04:37	04:28	05:10	06:12	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:48	22:07	21:30	20:17	18:54	16:39	15:44	15:44
31	08:15		06:50		04:35		05:12	06:14		07:18		08:49
	16:41		19:49		21:49		21:28	20:15		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	385	324	248	216
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

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Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Oš ulejas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (416)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:14 21:26	06:16 20:12	07:15 18:52	07:20 16:35	08:22 15:44
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:16 21:23	06:18 20:09	07:17 18:49	07:23 16:32	08:23 15:43
3	08:48 15:50	08:09 16:48	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:18 21:21	06:20 20:07	07:19 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:51	07:01 17:52	06:39 19:57	05:24 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:53	06:59 17:55	06:36 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:01	07:24 18:41	07:29 16:26	08:28 15:40
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:01	05:20 21:03	04:30 21:56	04:34 22:03	05:24 21:15	06:26 20:01	07:26 18:41	07:31 16:26	08:30 15:40
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:18 21:05	04:29 21:58	04:35 22:03	05:26 21:13	06:28 20:01	07:28 18:36	07:33 16:22	08:31 15:39
8	08:45 15:57	07:58 16:59	06:51 18:01	06:29 20:06	05:16 21:07	04:28 21:59	04:36 22:02	05:28 21:11	06:30 20:04	07:30 18:33	07:36 16:20	08:33 15:39
9	08:44 15:58	07:56 17:02	06:48 18:03	06:26 20:08	05:13 21:09	04:27 22:00	04:37 22:01	05:30 21:08	06:32 20:01	07:32 18:31	07:38 16:18	08:34 15:38
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:11	04:27 22:01	04:38 22:00	05:32 21:06	06:34 20:04	07:34 18:28	07:40 16:16	08:35 15:38
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:13	04:26 22:02	04:40 21:59	05:34 21:04	06:36 20:04	07:36 18:26	07:42 16:14	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:26 22:02	04:41 21:58	05:36 21:02	06:38 20:04	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:47 17:11	06:38 18:12	06:16 20:16	05:05 21:17	04:25 22:03	04:42 21:57	05:38 20:59	06:40 20:04	07:40 18:20	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:42 20:01	07:42 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:25 22:05	04:45 21:54	05:42 20:55	06:43 20:01	07:44 18:15	07:51 16:06	08:41 15:37
16	08:38 16:11	07:41 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:05	04:47 21:53	05:44 20:52	06:45 20:01	07:46 18:13	07:53 16:05	08:42 15:37
17	08:36 16:13	07:38 17:20	06:27 18:20	06:05 20:24	04:58 21:25	04:24 22:06	04:48 21:51	05:46 20:50	06:47 20:04	07:48 18:10	07:55 16:03	08:43 15:37
18	08:35 16:14	07:36 17:22	06:24 18:22	06:03 20:26	04:56 21:27	04:24 22:06	04:50 21:50	05:48 20:47	06:49 20:01	07:50 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:49	05:50 20:45	06:51 20:04	07:53 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:58 20:30	04:52 21:31	04:24 22:07	04:53 21:47	05:52 20:42	06:53 20:01	07:55 18:03	08:01 15:58	08:45 15:38
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:33	04:50 21:32	04:24 22:07	04:55 21:45	05:54 20:40	06:55 20:04	07:57 18:00	08:03 15:56	08:46 15:38
22	08:30 16:22	07:26 17:31	06:14 18:30	05:53 20:35	04:49 21:34	04:24 22:08	04:56 21:44	05:56 20:38	06:57 20:01	07:59 17:58	08:05 15:55	08:47 15:38
23	08:28 16:25	07:24 17:33	06:11 18:32	05:50 20:37	04:47 21:36	04:25 22:08	04:58 21:42	05:58 20:35	06:59 20:04	08:01 17:55	08:07 15:53	08:47 15:39
24	08:26 16:27	07:21 17:35	06:08 18:35	05:48 20:39	04:46 21:38	04:25 22:08	05:00 21:40	06:00 20:33	07:01 20:11	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:29	07:19 17:37	06:06 18:37	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:02 20:30	07:03 20:08	08:05 17:51	08:11 15:51	08:48 15:40
26	08:23 16:31	07:16 17:39	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:03 21:37	06:04 20:27	07:05 20:05	08:07 17:48	08:13 15:49	08:48 15:41
27	08:22 16:33	07:14 17:42	06:00 18:41	05:41 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:06 20:25	07:07 20:03	08:09 17:46	08:15 15:48	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:09 20:00	08:12 17:44	08:16 15:47	08:48 15:43
29	08:18 16:37		06:55 19:45	05:36 20:49	04:38 21:46	04:28 22:07	05:09 21:31	06:10 20:20	07:11 18:57	08:14 17:41	08:18 15:46	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:11 21:29	06:12 20:17	07:13 18:55	08:16 17:39	08:20 15:45	08:48 15:44
31	08:14 16:42		06:50 19:49		04:36 21:49		05:12 21:28	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Paegles - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (540)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:05	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Palmas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (455)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:13 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:29 22:07	05:14 21:26	06:16 20:12	07:15 18:52	07:20 16:34	08:22 15:44
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:33 21:52	04:29 22:06	05:16 21:24	06:18 20:09	07:17 18:49	07:23 16:32	08:24 15:43
3	08:48 15:49	08:09 16:48	07:04 17:50	06:42 19:55	05:26 20:57	04:32 21:53	04:30 22:06	05:18 21:22	06:20 20:07	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:22 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:53	06:59 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:24 20:01	07:23 18:41	07:29 16:26	08:28 15:40
6	08:46 15:53	08:03 16:55	06:56 17:57	06:34 20:01	05:20 21:04	04:29 21:57	04:33 22:04	05:24 21:15	06:26 20:01	07:26 18:39	07:31 16:24	08:30 15:39
7	08:46 15:55	08:01 16:57	06:53 17:59	06:31 20:03	05:17 21:06	04:29 21:58	04:34 22:03	05:26 21:13	06:28 19:56	07:28 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:06	05:15 21:08	04:28 21:59	04:36 22:02	05:28 21:11	06:30 19:53	07:30 18:33	07:36 16:19	08:33 15:38
9	08:45 15:58	07:56 17:01	06:48 18:03	06:26 20:08	05:13 21:10	04:27 22:00	04:37 22:01	05:30 21:09	06:31 19:51	07:32 18:31	07:38 16:17	08:34 15:38
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:12	04:27 22:01	04:38 22:00	05:32 21:06	06:33 19:48	07:34 18:28	07:40 16:15	08:36 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:14	04:26 22:02	04:39 21:59	05:34 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:16	04:25 22:03	04:41 21:58	05:36 21:02	06:37 19:43	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:47 17:10	06:38 18:11	06:15 20:16	05:05 21:17	04:25 22:04	04:42 21:57	05:38 20:59	06:39 19:40	07:40 18:20	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:19	04:25 22:04	04:43 21:56	05:40 20:57	06:41 19:37	07:42 18:18	07:49 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:42 20:55	06:43 19:35	07:44 18:15	07:51 16:06	08:41 15:36
16	08:38 16:10	07:41 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:06	04:46 21:53	05:44 20:52	06:45 19:32	07:46 18:13	07:53 16:04	08:42 15:36
17	08:37 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:52	05:46 20:50	06:47 19:29	07:48 18:10	07:55 16:03	08:43 15:36
18	08:35 16:14	07:36 17:22	06:24 18:22	06:03 20:26	04:55 21:27	04:24 22:07	04:49 21:50	05:48 20:47	06:49 19:27	07:50 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:49	05:50 20:45	06:51 19:24	07:53 18:05	07:59 15:59	08:45 15:37
20	08:33 16:18	07:31 17:26	06:19 18:26	05:58 20:30	04:52 21:31	04:24 22:07	04:53 21:47	05:52 20:43	06:53 19:21	07:55 18:03	08:01 15:58	08:46 15:37
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:33	04:50 21:32	04:24 22:08	04:54 21:46	05:54 20:40	06:55 19:19	07:57 18:00	08:03 15:56	08:46 15:38
22	08:30 16:22	07:26 17:30	06:14 18:30	05:53 20:35	04:49 21:34	04:24 22:08	04:56 21:44	05:56 20:38	06:57 19:16	07:59 17:58	08:05 15:55	08:47 15:38
23	08:28 16:24	07:24 17:33	06:11 18:32	05:50 20:37	04:47 21:36	04:24 22:08	04:58 21:42	05:58 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:39
24	08:27 16:26	07:21 17:35	06:08 18:34	05:48 20:39	04:45 21:38	04:25 22:08	04:59 21:41	06:00 20:33	07:01 19:11	08:03 17:53	08:09 15:52	08:48 15:39
25	08:25 16:28	07:19 17:37	06:06 18:37	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:02 20:30	07:03 19:08	08:05 17:51	08:11 15:50	08:48 15:40
26	08:23 16:31	07:16 17:39	06:03 18:39	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:04 20:27	07:05 19:05	08:07 17:48	08:13 15:49	08:48 15:41
27	08:22 16:33	07:14 17:41	06:00 18:41	05:40 20:45	04:41 21:43	04:26 22:08	05:05 21:35	06:06 20:25	07:07 19:02	08:09 17:46	08:15 15:48	08:48 15:41
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:39 21:44	04:27 22:08	05:07 21:33	06:08 20:22	07:09 19:00	08:12 17:43	08:17 15:47	08:49 15:42
29	08:18 16:37		06:55 19:45	05:36 20:49	04:38 21:46	04:27 22:07	05:08 21:32	06:10 20:20	07:11 18:57	08:14 17:41	08:18 15:46	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:30	06:12 20:17	07:13 18:54	08:16 17:39	08:20 15:45	08:49 15:44
31	08:14 16:41		06:50 19:49		04:36 21:49		05:12 21:28	06:14 20:15		07:18 16:37		08:49 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Pastari - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (422)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:14 21:26	06:16 20:12	07:15 18:52	07:20 16:35	08:22 15:44
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:16 21:23	06:18 20:09	07:17 18:49	07:23 16:32	08:23 15:43
3	08:48 15:50	08:09 16:48	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:18 21:21	06:20 20:07	07:19 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:51	07:01 17:52	06:39 19:57	05:24 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:53	06:59 17:55	06:36 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:01	07:24 18:41	07:29 16:26	08:28 15:40
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:01	05:20 21:03	04:30 21:56	04:34 22:03	05:24 21:15	06:26 19:59	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:18 21:05	04:29 21:58	04:35 22:03	05:26 21:13	06:28 19:56	07:28 18:36	07:33 16:22	08:31 15:39
8	08:45 15:57	07:58 16:59	06:51 18:01	06:29 20:06	05:16 21:07	04:28 21:59	04:36 22:02	05:28 21:11	06:30 19:54	07:30 18:33	07:36 16:20	08:33 15:39
9	08:44 15:58	07:56 17:02	06:48 18:03	06:26 20:08	05:13 21:09	04:27 22:00	04:37 22:01	05:30 21:08	06:32 19:51	07:32 18:31	07:38 16:18	08:34 15:38
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:11	04:27 22:01	04:38 22:00	05:32 21:06	06:34 19:48	07:34 18:28	07:40 16:16	08:35 15:38
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:13	04:26 22:02	04:40 21:59	05:34 21:04	06:36 19:46	07:36 18:26	07:42 16:14	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:26 22:03	04:41 21:58	05:36 21:02	06:38 19:43	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:47 17:11	06:38 18:12	06:16 20:16	05:05 21:17	04:25 22:03	04:42 21:57	05:38 20:59	06:40 19:40	07:40 18:20	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:42 19:37	07:42 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:25 22:05	04:45 21:54	05:42 20:55	06:43 19:35	07:44 18:15	07:51 16:06	08:41 15:37
16	08:38 16:11	07:41 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:05	04:47 21:53	05:44 20:52	06:45 19:32	07:46 18:13	07:53 16:04	08:42 15:37
17	08:36 16:12	07:38 17:20	06:27 18:20	06:05 20:24	04:58 21:25	04:24 22:06	04:48 21:51	05:46 20:50	06:47 19:29	07:48 18:10	07:55 16:03	08:43 15:37
18	08:35 16:14	07:36 17:22	06:24 18:22	06:03 20:26	04:56 21:27	04:24 22:06	04:50 21:50	05:48 20:47	06:49 19:27	07:50 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:49	05:50 20:45	06:51 19:24	07:53 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:58 20:30	04:52 21:31	04:24 22:07	04:53 21:47	05:52 20:42	06:53 19:21	07:55 18:03	08:01 15:58	08:45 15:37
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:33	04:50 21:32	04:24 22:07	04:55 21:45	05:54 20:40	06:55 19:19	07:57 18:00	08:03 15:56	08:46 15:38
22	08:30 16:22	07:26 17:31	06:14 18:30	05:53 20:35	04:49 21:34	04:24 22:08	04:56 21:44	05:56 20:38	06:57 19:16	07:59 17:58	08:05 15:55	08:47 15:38
23	08:28 16:25	07:24 17:33	06:11 18:32	05:50 20:37	04:47 21:36	04:25 22:08	04:58 21:42	05:58 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:39
24	08:26 16:27	07:21 17:35	06:08 18:35	05:48 20:39	04:46 21:38	04:25 22:08	05:00 21:40	06:00 20:33	07:01 19:11	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:29	07:19 17:37	06:06 18:37	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:02 20:30	07:03 19:08	08:05 16:51	08:11 15:51	08:48 15:40
26	08:23 16:31	07:16 17:39	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:03 21:37	06:04 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:41
27	08:22 16:33	07:14 17:42	06:00 18:41	05:41 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:06 20:25	07:07 19:03	08:09 16:46	08:15 15:48	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:09 19:00	08:12 16:44	08:16 15:47	08:48 15:43
29	08:18 16:37		06:55 19:45	05:36 20:49	04:38 21:46	04:28 22:07	05:09 21:31	06:10 20:20	07:11 18:57	08:14 16:41	08:18 15:46	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:11 21:29	06:12 20:17	07:13 18:55	08:16 16:39	08:20 15:45	08:48 15:44
31	08:14 16:42		06:50 19:49		04:36 21:49		05:12 21:28	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Pastarini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (426)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12		07:09	06:47	05:31	04:35	04:29	05:14	06:16	07:15		07:20	15:50 (DD3)	08:22
	15:47	16:44		17:46	19:51	20:53	21:50	22:06	21:26	20:12	18:52		16:35	11 16:01 (DD3)	15:44
2	08:48	08:11		07:06	06:44	05:29	04:34	04:30	05:16	06:18	07:17		07:23	15:50 (DD3)	08:23
	15:48	16:46		17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49		16:32	8 15:58 (DD3)	15:43
3	08:48	08:09		07:04	06:42	05:27	04:33	04:31	05:18	06:20	07:19		07:25	15:51 (DD3)	08:25
	15:50	16:48		17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:47		16:30	4 15:55 (DD3)	15:42
4	08:47	08:07		07:01	06:39	05:24	04:32	04:32	05:20	06:22	07:21		07:27		08:27
	15:51	16:51		17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44		16:28		15:41
5	08:47	08:05		06:59	06:36	05:22	04:31	04:33	05:22	06:24	07:24		07:29		08:28
	15:52	16:53		17:55	19:59	21:01	21:55	22:04	21:17	20:01	18:41		16:26		15:40
6	08:46	08:03		06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26		07:31		08:30
	15:54	16:55		17:57	20:01	21:03	21:56	22:03	21:15	19:59	18:39		16:24		15:40
7	08:46	08:00		06:53	06:31	05:18	04:29	04:35	05:26	06:28	07:28		07:33		08:31
	15:55	16:57		17:59	20:03	21:05	21:58	22:03	21:13	19:56	18:36		16:22		15:39
8	08:45	07:58		06:51	06:29	05:16	04:28	04:36	05:28	06:30	07:30		07:36		08:33
	15:57	16:59	4	16:26 (DD3)	18:01	20:06	21:07	21:59	22:02	21:11	19:54	18:33	16:20		15:39
9	08:44	07:56		16:21 (DD3)	06:48	06:26	05:13	04:28	04:37	05:30	06:32	07:32	07:38		08:34
	15:58	17:02	8	16:29 (DD3)	18:03	20:08	21:09	22:00	22:01	21:08	19:51	18:31	16:18		15:38
10	08:44	07:54		16:20 (DD3)	06:46	06:23	05:11	04:27	04:38	05:32	06:34	07:34	07:40		08:35
	16:00	17:04	12	16:32 (DD3)	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:16		15:38
11	08:43	07:52		16:19 (DD3)	06:43	06:21	05:09	04:26	04:40	05:34	06:36	07:36	07:42		08:37
	16:02	17:06	15	16:34 (DD3)	18:07	20:12	21:13	22:02	21:59	21:04	19:46	18:26	16:14		15:37
12	08:42	07:50		16:19 (DD3)	06:40	06:18	05:07	04:26	04:41	05:36	06:38	07:38	07:44		08:38
	16:03	17:08	18	16:37 (DD3)	18:09	20:14	21:15	22:02	21:58	21:02	19:43	18:23	16:12		15:37
13	08:41	07:47		16:19 (DD3)	06:38	06:16	05:05	04:25	04:42	05:38	06:40	07:40	07:46		08:39
	16:05	17:11	19	16:38 (DD3)	18:12	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:10		15:37
14	08:40	07:45		16:18 (DD3)	06:35	06:13	05:03	04:25	04:44	05:40	06:42	07:42	07:48		08:40
	16:07	17:13	19	16:37 (DD3)	18:14	20:18	21:19	22:04	21:55	20:57	19:37	18:18	16:08		15:37
15	08:39	07:43		16:19 (DD3)	06:32	06:10	05:01	04:25	04:45	05:42	06:44	07:44	07:51		08:41
	16:09	17:15	18	16:37 (DD3)	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06		15:37
16	08:38	07:41		16:19 (DD3)	06:30	06:08	04:59	04:24	04:47	05:44	06:45	07:46	07:53		08:42
	16:11	17:17	17	16:36 (DD3)	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:05		15:37
17	08:36	07:38		16:20 (DD3)	06:27	06:05	04:58	04:24	04:48	05:46	06:47	07:48	07:55		08:43
	16:13	17:20	16	16:36 (DD3)	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:03		15:37
18	08:35	07:36		16:21 (DD3)	06:24	06:03	04:56	04:24	04:50	05:48	06:49	07:50	07:57		08:44
	16:14	17:22	14	16:35 (DD3)	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08	16:01		15:37
19	08:34	07:33		16:23 (DD3)	06:22	06:00	04:54	04:24	04:51	05:50	06:51	07:53	07:59		08:45
	16:16	17:24	10	16:33 (DD3)	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	16:00		15:37
20	08:32	07:31		16:26 (DD3)	06:19	05:58	04:52	04:24	04:53	05:52	06:53	07:55	08:01		08:45
	16:18	17:26	3	16:29 (DD3)	18:26	20:30	21:31	22:07	21:47	20:42	19:21	18:03	15:58		15:38
21	08:31	07:29		06:16	05:55	04:50	04:24	04:55	05:54	06:55	07:57	08:03	08:05		08:46
	16:20	17:28		18:28	20:33	21:32	22:07	21:45	20:40	19:19	18:00	15:56			15:38
22	08:30	07:26		06:14	05:53	04:49	04:24	04:56	05:56	06:57	07:59		16:54 (DD3)	08:05	08:47
	16:22	17:31		18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:58	7	17:01 (DD3)	15:55	15:38
23	08:28	07:24		06:11	05:50	04:47	04:25	04:58	05:58	06:59	08:01		16:53 (DD3)	08:07	08:47
	16:25	17:33		18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	11	17:04 (DD3)	15:53	15:39
24	08:26	07:21		06:08	05:48	04:46	04:25	05:00	06:00	07:01	08:03		16:51 (DD3)	08:09	08:47
	16:27	17:35		18:35	20:39	21:38	22:08	21:40	20:33	19:11	17:53	14	17:05 (DD3)	15:52	15:39
25	08:25	07:19		06:06	05:45	04:44	04:25	05:02	06:02	07:03	07:05		15:49 (DD3)	08:11	08:48
	16:29	17:37		18:37	20:41	21:39	22:08	21:39	20:30	19:08	16:51	17	16:06 (DD3)	15:51	15:40
26	08:23	07:16		06:03	05:43	04:43	04:26	05:03	06:04	07:05	07:07		15:48 (DD3)	08:13	08:48
	16:31	17:39		18:39	20:43	21:41	22:08	21:37	20:27	19:05	16:48	18	16:06 (DD3)	15:49	15:41
27	08:22	07:14		06:00	05:41	04:41	04:26	05:05	06:06	07:07	07:10		15:48 (DD3)	08:15	08:48
	16:33	17:42		18:41	20:45	21:42	22:08	21:35	20:25	19:03	16:46	19	16:07 (DD3)	15:48	15:42
28	08:20	07:11		05:58	05:38	04:40	04:27	05:07	06:08	07:09	07:12		15:48 (DD3)	08:16	08:48
	16:35	17:44		18:43	20:47	21:44	22:07	21:33	20:22	19:00	16:44	19	16:07 (DD3)	15:47	15:43
29	08:18			06:55	05:36	04:38	04:28	05:09	06:10	07:11	07:14		15:48 (DD3)	08:18	08:48
	16:37			19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	19	16:07 (DD3)	15:46	15:44
30	08:16			06:52	05:33	04:37	04:28	05:11	06:12	07:13	07:16		15:48 (DD3)	08:20	08:48
	16:39			19:47	20:51	21:47	22:07	21:29	20:17	18:55	16:39	18	16:06 (DD3)	15:45	15:45
31	08:14			06:50		04:36		05:13	06:14		07:18		15:48 (DD3)		08:48
	16:42			19:49		21:49		21:28	20:15		16:37	15	16:03 (DD3)		15:46
Potential sun hours	236	266		366	426	507	528	528	469	384	324		248		217
Total, worst case			173								157		23		
Sun reduction			0,22								0,29		0,08		
Oper. time red.			1,00								1,00		1,00		
Wind dir. red.			1,00								1,00		1,00		
Total reduction			0,22								0,29		0,08		
Total, real			39								46		2		

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Pavlani - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (563)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Priednieki - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (487)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:07	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:15	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:52	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:56	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:26	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:36
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:05	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:02	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:05	15:36
16	08:38	07:40	06:29	06:07	04:59	04:23	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:31	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:08	21:45	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:13	05:52	04:48	04:23	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:34	18:34	20:39	21:38	22:08	21:41	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:15	08:48
	16:32	17:41	18:40	20:45	21:43	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:49
	16:34	17:43	18:42	20:47	21:44	22:08	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:37	04:27	05:08	06:09	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Purmala - Shadow Receptor:  $1,0 \times 1,0$  Azimuth:  $3,1^\circ$  Slope:  $90,0^\circ$  (489)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	January	February	March	April	May	June
1	08:48 15:46	08:12 16:43	15:58 (Pr3a) 16:09 (Pr3a)	07:09 17:45	15:59 (PrRR3) 17:14 (Pr25)	06:47 19:51
2	08:48 15:47	08:10 16:45	15:57 (Pr3a) 16:11 (Pr3a)	07:06 17:48	16:52 (Pr25) 17:14 (Pr25)	19:51 19:53
3	08:48 15:49	08:09 16:48	15:56 (Pr3a) 16:14 (Pr3a)	07:03 17:50	16:52 (Pr25) 17:15 (Pr25)	19:51 19:55
4	08:47 15:50	08:07 16:50	15:55 (Pr3a) 16:15 (Pr3a)	07:01 17:52	16:52 (Pr25) 17:15 (Pr25)	19:51 19:57
5	08:47 15:51	08:05 16:52	15:55 (Pr3a) 16:15 (Pr3a)	06:58 17:54	16:51 (Pr25) 17:14 (Pr25)	19:51 19:59
6	08:46 15:53	08:02 16:54	15:55 (Pr3a) 16:16 (Pr3a)	06:56 17:56	16:52 (Pr25) 17:14 (Pr25)	19:51 20:01
7	08:46 15:54	08:00 16:57	15:55 (Pr3a) 16:17 (Pr3a)	06:53 17:58	16:52 (Pr25) 17:13 (Pr25)	19:51 20:03
8	08:45 15:56	07:58 16:59	15:54 (Pr3a) 16:16 (Pr3a)	06:51 18:01	16:52 (Pr25) 17:12 (Pr25)	19:51 20:05
9	08:44 15:58	07:56 17:01	15:55 (PrRR3) 16:17 (PrRR3)	06:48 18:03	16:53 (Pr25) 17:10 (Pr25)	19:51 20:07
10	08:44 15:59	07:54 17:03	15:54 (PrRR3) 16:19 (PrRR3)	06:45 18:05	16:55 (Pr25) 17:09 (Pr25)	19:51 20:09
11	08:43 16:01	07:52 17:06	15:53 (PrRR3) 16:20 (PrRR3)	06:43 18:07	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
12	08:42 16:03	07:49 17:08	15:52 (PrRR3) 16:21 (PrRR3)	06:40 18:09	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
13	08:41 16:04	07:47 17:10	15:51 (PrRR3) 16:21 (PrRR3)	06:37 18:11	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
14	08:40 16:06	07:45 17:12	15:50 (PrRR3) 16:22 (PrRR3)	06:35 18:13	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
15	08:39 16:08	07:43 17:15	15:50 (PrRR3) 16:23 (PrRR3)	06:32 18:15	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
16	08:38 16:10	07:40 17:17	15:49 (PrRR3) 16:23 (PrRR3)	06:29 18:17	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
17	08:36 16:12	07:38 17:19	15:50 (PrRR3) 16:24 (PrRR3)	06:27 18:20	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
18	08:35 16:14	07:36 17:21	15:49 (PrRR3) 16:23 (PrRR3)	06:24 18:22	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
19	08:34 16:16	07:33 17:23	15:49 (PrRR3) 16:24 (PrRR3)	06:21 18:24	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
20	08:32 16:18	07:31 17:26	15:49 (PrRR3) 16:23 (PrRR3)	06:19 18:26	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
21	08:31 16:20	07:28 17:28	15:50 (PrRR3) 16:24 (PrRR3)	06:16 18:28	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
22	08:30 16:22	07:26 17:30	15:50 (PrRR3) 16:23 (PrRR3)	06:13 18:30	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
23	08:28 16:24	07:24 17:32	15:50 (PrRR3) 16:22 (PrRR3)	06:11 18:32	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
24	08:26 16:26	07:21 17:35	15:51 (PrRR3) 16:21 (PrRR3)	06:08 18:34	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
25	08:25 16:28	07:19 17:37	15:51 (PrRR3) 17:07 (Pr25)	06:05 18:36	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
26	08:23 16:30	07:16 17:39	15:53 (PrRR3) 17:10 (Pr25)	06:03 18:38	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
27	08:22 16:32	07:14 17:41	15:54 (PrRR3) 17:12 (Pr25)	06:00 18:40	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
28	08:20 16:34	07:11 17:43	15:55 (PrRR3) 17:13 (Pr25)	05:57 18:43	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
29	08:18 16:37			06:55 19:45	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
30	08:16 16:39			06:52 19:47	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
31	08:14 16:41	16:00 (Pr3a) 16:06 (Pr3a)		06:49 19:49	16:57 (Pr25) 17:06 (Pr25)	19:51 20:12
Potential sun hours	236	266	366	426	507	528
Total, worst case	6	799	229			
Sun reduction	0,13	0,23	0,39			
Oper. time red.	1,00	1,00	1,00			
Wind dir. red.	1,00	1,00	1,00			
Total reduction	0,13	0,23	0,39			
Total, real	1	180	90			

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Purmala - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (489)  
Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October		November		December
1	04:28 22:07	05:14 21:26	06:15 20:12	07:15 18:51		07:20 16:34		15:24 (PrRR3) 15:48 (PrRR3)
2	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	3	17:39 (Pr25) 17:42 (Pr25)	24	15:24 (Pr3a) 15:46 (PrRR3)
3	04:30 22:06	05:18 21:21	06:19 20:07	07:19 18:46	12	17:34 (Pr25) 17:46 (Pr25)	22	15:24 (Pr3a) 15:46 (Pr3a)
4	04:31 22:05	05:19 21:19	06:21 20:04	07:21 18:44	16	17:32 (Pr25) 17:48 (Pr25)	22	15:25 (Pr3a) 15:47 (Pr3a)
5	04:32 22:04	05:21 21:17	06:23 20:01	07:23 18:41	19	17:30 (Pr25) 17:49 (Pr25)	22	15:24 (Pr3a) 15:46 (Pr3a)
6	04:33 22:04	05:23 21:15	06:25 19:59	07:25 18:38	20	17:29 (Pr25) 17:49 (Pr25)	22	15:26 (Pr3a) 15:46 (Pr3a)
7	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	22	17:27 (Pr25) 17:49 (Pr25)	19	15:26 (Pr3a) 15:45 (Pr3a)
8	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	22	17:27 (Pr25) 17:49 (Pr25)	17	15:26 (Pr3a) 15:43 (Pr3a)
9	04:36 22:01	05:29 21:08	06:31 19:51	07:31 18:30	23	17:26 (Pr25) 17:49 (Pr25)	14	15:28 (Pr3a) 15:42 (Pr3a)
10	04:37 22:00	05:31 21:06	06:33 19:48	07:34 18:28	23	17:26 (Pr25) 17:49 (Pr25)	10	15:29 (Pr3a) 15:39 (Pr3a)
11	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	23	17:26 (Pr25) 17:49 (Pr25)	6	15:32 (Pr3a) 15:38 (Pr3a)
12	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	32	16:34 (PrRR3) 17:48 (Pr25)		08:38 15:36
13	04:41 21:57	05:37 20:59	06:39 19:40	07:40 18:20	37	16:30 (PrRR3) 17:47 (Pr25)		08:39 15:36
14	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:17	40	16:28 (PrRR3) 17:46 (Pr25)		08:40 15:36
15	04:44 21:54	05:41 20:55	06:43 19:34	07:44 18:15	40	16:25 (PrRR3) 17:43 (Pr25)		08:41 15:36
16	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	37	16:25 (PrRR3) 17:41 (Pr25)		08:42 15:36
17	04:47 21:51	05:45 20:50	06:47 19:29	07:48 18:10	33	16:23 (PrRR3) 17:38 (Pr25)		08:43 15:36
18	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	31	16:22 (PrRR3) 16:53 (PrRR3)		08:44 15:36
19	04:51 21:49	05:49 20:45	06:51 19:24	07:52 18:05	32	16:21 (PrRR3) 16:53 (PrRR3)		08:45 15:36
20	04:52 21:47	05:51 20:42	06:53 19:21	07:54 18:02	33	16:21 (PrRR3) 16:54 (PrRR3)		08:45 15:37
21	04:54 21:45	05:53 20:40	06:55 19:18	07:57 18:00	34	16:20 (PrRR3) 16:54 (PrRR3)		08:46 15:37
22	04:56 21:44	05:55 20:37	06:57 19:16	07:59 17:57	35	16:19 (PrRR3) 16:54 (PrRR3)		08:47 15:38
23	04:57 21:42	05:57 20:35	06:59 19:13	08:01 17:55	34	16:19 (PrRR3) 16:53 (PrRR3)		08:47 15:38
24	04:59 21:41	05:59 20:32	07:01 19:10	08:03 17:53	35	16:19 (PrRR3) 16:54 (PrRR3)		08:48 15:39
25	05:01 21:39	06:01 20:30	07:03 19:08	07:05 16:50	34	15:19 (PrRR3) 15:53 (PrRR3)		08:48 15:39
26	05:03 21:37	06:03 20:27	07:05 19:05	07:07 16:48	33	15:19 (PrRR3) 15:52 (PrRR3)		08:48 15:40
27	05:04 21:35	06:05 20:25	07:07 19:02	07:09 16:45	33	15:20 (PrRR3) 15:53 (PrRR3)		08:48 15:41
28	05:06 21:33	06:07 20:22	07:09 19:00	07:12 16:43	32	15:20 (PrRR3) 15:52 (PrRR3)		08:49 15:42
29	05:08 21:31	06:09 20:20	07:11 18:57	07:14 16:41	31	15:20 (PrRR3) 15:51 (PrRR3)		08:49 15:43
30	05:10 21:29	06:11 20:17	07:13 18:54	07:16 16:38	28	15:22 (PrRR3) 15:50 (PrRR3)		08:49 15:44
31	05:12 21:28	06:13 20:14		07:18 16:36	27	15:22 (PrRR3) 15:49 (PrRR3)		08:48 15:45
Potential sun hours	529	469	384	324		248		217
Total, worst case				854		198		
Sun reduction				0,29		0,08		
Oper. time red.				1,00		1,00		
Wind dir. red.				1,00		1,00		
Total reduction				0,29		0,08		
Total, real				248		15		

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

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

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Pūrmāliešis - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (558)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:07	21:26	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:24
	15:47	16:45	17:48	19:53	20:55	21:52	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:09	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:21	20:06	18:46	16:29	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:05	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:36
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:51	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:55	19:34	18:15	16:06	15:36
16	08:38	07:40	06:29	06:07	04:59	04:23	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:17	20:22	21:23	22:06	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:31	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:08	21:46	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:34	18:34	20:39	21:38	22:08	21:41	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:22	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:15	08:48
	16:32	17:41	18:40	20:45	21:43	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:49
	16:34	17:43	18:42	20:47	21:44	22:08	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:49
	16:41		19:49		21:49		21:28	20:14		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Purvietas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (439)  
 Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:13	07:09	06:47	05:31	04:35	04:29	05:15	06:16	07:16	07:20	08:22
	15:47	16:44	17:46	19:51	20:53	21:50	22:06	21:26	20:12	18:52	16:35	15:44
2	08:48	08:11	07:06	06:45	05:29	04:34	04:30	05:17	06:18	07:18	07:23	08:23
	15:49	16:46	17:48	19:53	20:55	21:51	22:06	21:24	20:09	18:49	16:33	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:19	06:20	07:20	07:25	08:25
	15:50	16:49	17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:47	16:30	15:42
4	08:47	08:07	07:01	06:39	05:25	04:32	04:32	05:20	06:22	07:22	07:27	08:27
	15:51	16:51	17:53	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:42
5	08:47	08:05	06:59	06:37	05:22	04:31	04:33	05:22	06:24	07:24	07:29	08:28
	15:53	16:53	17:55	19:59	21:01	21:55	22:04	21:17	20:02	18:41	16:26	15:41
6	08:46	08:03	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:02	21:03	21:56	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:01	06:54	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:33	08:31
	15:56	16:58	17:59	20:04	21:05	21:58	22:03	21:13	19:56	18:36	16:22	15:40
8	08:45	07:58	06:51	06:29	05:16	04:29	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	17:00	18:01	20:06	21:07	21:59	22:02	21:11	19:54	18:34	16:20	15:39
9	08:44	07:56	06:48	06:26	05:14	04:28	04:37	05:30	06:32	07:32	07:38	08:34
	15:59	17:02	18:03	20:08	21:09	22:00	22:01	21:09	19:51	18:31	16:18	15:39
10	08:44	07:54	06:46	06:24	05:12	04:27	04:39	05:32	06:34	07:34	07:40	08:35
	16:00	17:04	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:10	04:27	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:08	20:12	21:13	22:02	21:59	21:04	19:46	18:26	16:14	15:38
12	08:42	07:50	06:40	06:18	05:08	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:04	17:09	18:10	20:14	21:15	22:02	21:58	21:02	19:43	18:23	16:12	15:37
13	08:41	07:47	06:38	06:16	05:06	04:26	04:43	05:38	06:40	07:40	07:46	08:39
	16:05	17:11	18:12	20:16	21:17	22:03	21:57	20:59	19:40	18:21	16:10	15:37
14	08:40	07:45	06:35	06:13	05:04	04:25	04:44	05:40	06:42	07:42	07:48	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:38	18:18	16:08	15:37
15	08:39	07:43	06:33	06:11	05:02	04:25	04:46	05:42	06:44	07:44	07:51	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:16	16:07	15:37
16	08:38	07:41	06:30	06:08	05:00	04:25	04:47	05:44	06:46	07:46	07:53	08:42
	16:11	17:18	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:05	15:37
17	08:36	07:38	06:27	06:06	04:58	04:25	04:49	05:46	06:48	07:48	07:55	08:43
	16:13	17:20	18:20	20:24	21:25	22:06	21:51	20:50	19:30	18:11	16:03	15:37
18	08:35	07:36	06:25	06:03	04:56	04:25	04:50	05:48	06:50	07:51	07:57	08:44
	16:15	17:22	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08	16:01	15:37
19	08:34	07:34	06:22	06:00	04:54	04:25	04:52	05:50	06:52	07:53	07:59	08:45
	16:17	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:06	16:00	15:38
20	08:32	07:31	06:19	05:58	04:53	04:25	04:53	05:52	06:54	07:55	08:01	08:45
	16:19	17:26	18:26	20:31	21:30	22:07	21:47	20:43	19:22	18:03	15:58	15:38
21	08:31	07:29	06:17	05:55	04:51	04:25	04:55	05:54	06:56	07:57	08:03	08:46
	16:21	17:29	18:28	20:33	21:32	22:07	21:45	20:40	19:19	18:01	15:57	15:38
22	08:30	07:26	06:14	05:53	04:49	04:25	04:57	05:56	06:58	07:59	08:05	08:46
	16:23	17:31	18:31	20:35	21:34	22:07	21:44	20:38	19:16	17:58	15:55	15:39
23	08:28	07:24	06:11	05:51	04:48	04:25	04:58	05:58	07:00	08:01	08:07	08:47
	16:25	17:33	18:33	20:37	21:36	22:08	21:42	20:35	19:13	17:56	15:54	15:39
24	08:26	07:21	06:09	05:48	04:46	04:25	05:00	06:00	07:02	08:03	08:09	08:47
	16:27	17:35	18:35	20:39	21:38	22:08	21:40	20:33	19:11	17:53	15:52	15:40
25	08:25	07:19	06:06	05:46	04:44	04:26	05:02	06:02	07:04	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:41
26	08:23	07:16	06:03	05:43	04:43	04:26	05:04	06:04	07:06	08:07	08:13	08:48
	16:31	17:40	18:39	20:43	21:41	22:08	21:37	20:28	19:05	17:49	15:50	15:41
27	08:22	07:14	06:01	05:41	04:42	04:27	05:05	06:06	07:08	08:09	08:15	08:48
	16:33	17:42	18:41	20:45	21:42	22:08	21:35	20:25	19:03	17:46	15:49	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:10	08:12	08:16	08:48
	16:35	17:44	18:43	20:47	21:44	22:07	21:33	20:22	19:00	17:44	15:47	15:43
29	08:18		06:55	05:36	04:39	04:28	05:09	06:10	07:12	08:14	08:18	08:48
	16:38		19:45	20:49	21:46	22:07	21:31	20:20	18:57	17:42	15:46	15:44
30	08:16		06:53	05:34	04:38	04:29	05:11	06:12	07:14	08:16	08:20	08:48
	16:40		19:47	20:51	21:47	22:07	21:29	20:17	18:55	17:39	15:45	15:45
31	08:14		06:50		04:36		05:13	06:14		07:18		08:48
	16:42		19:49		21:49		21:28	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Purvietinas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (441)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:13 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:15 21:26	06:16 20:12	07:16 18:52	07:20 16:35	08:22 15:44
2	08:48 15:49	08:11 16:46	07:06 17:48	06:45 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:17 21:24	06:18 20:09	07:23 18:49	07:23 16:33	08:23 15:43
3	08:48 15:50	08:09 16:49	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:19 21:21	06:20 20:07	07:20 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:51	07:01 17:53	06:39 19:57	05:25 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:22 18:44	07:27 16:28	08:27 15:42
5	08:47 15:53	08:05 16:53	06:59 17:55	06:37 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:02	07:24 18:41	07:29 16:26	08:28 15:41
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:02	05:20 21:03	04:30 21:56	04:34 22:03	05:24 21:15	06:26 19:59	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:56	08:01 16:58	06:54 17:59	06:31 20:04	05:18 21:05	04:29 21:58	04:35 22:03	05:26 21:13	06:28 19:56	07:28 18:36	07:33 16:22	08:31 15:40
8	08:45 15:57	07:58 17:00	06:51 18:01	06:29 20:06	05:16 21:07	04:29 21:59	04:36 22:02	05:28 21:11	06:30 19:54	07:30 18:34	07:36 16:20	08:33 15:39
9	08:44 15:59	07:56 17:02	06:48 18:03	06:26 20:08	05:14 21:09	04:28 22:00	04:37 22:01	05:30 21:09	06:32 19:51	07:32 18:31	07:38 16:18	08:34 15:39
10	08:44 16:00	07:54 17:04	06:46 18:05	06:24 20:10	05:12 21:11	04:27 22:01	04:39 22:00	05:32 21:06	06:34 19:48	07:34 18:28	07:40 16:16	08:35 15:38
11	08:43 16:02	07:52 17:06	06:43 18:08	06:21 20:12	05:10 21:13	04:27 22:02	04:40 21:59	05:34 21:04	06:36 19:46	07:36 18:26	07:42 16:14	08:37 15:38
12	08:42 16:04	07:50 17:09	06:40 18:10	06:18 20:14	05:08 21:15	04:26 22:02	04:41 21:58	05:36 21:02	06:38 19:43	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:47 17:11	06:38 18:12	06:16 20:16	05:06 21:17	04:26 22:03	04:43 21:57	05:38 20:59	06:40 19:40	07:40 18:21	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:04 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:42 19:38	07:42 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:33 18:16	06:11 20:20	05:02 21:21	04:25 22:05	04:46 21:54	05:42 20:55	06:44 19:35	07:44 18:16	07:51 16:07	08:41 15:37
16	08:38 16:11	07:41 17:18	06:30 18:18	06:08 20:22	05:00 21:23	04:25 22:05	04:47 21:53	05:44 20:52	06:46 19:32	07:46 18:13	07:53 16:05	08:42 15:37
17	08:36 16:13	07:38 17:20	06:27 18:20	06:06 20:24	04:58 21:25	04:25 22:06	04:49 21:51	05:46 20:50	06:48 19:30	07:48 18:11	07:55 16:03	08:43 15:37
18	08:35 16:15	07:36 17:22	06:25 18:22	06:03 20:26	04:56 21:27	04:25 22:06	04:50 21:50	05:48 20:47	06:50 19:27	07:51 18:08	07:57 16:01	08:44 15:37
19	08:34 16:17	07:34 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:25 22:07	04:52 21:48	05:50 20:45	06:52 19:24	07:53 18:06	07:59 16:00	08:45 15:38
20	08:32 16:19	07:31 17:26	06:19 18:26	05:58 20:31	04:53 21:30	04:25 22:07	04:53 21:47	05:52 20:43	06:54 19:22	07:55 18:03	08:01 15:58	08:45 15:38
21	08:31 16:21	07:29 17:29	06:17 18:28	05:55 20:33	04:51 21:32	04:25 22:07	04:55 21:45	05:54 20:40	06:56 19:19	07:57 18:01	08:03 15:57	08:46 15:38
22	08:30 16:23	07:26 17:31	06:14 18:31	05:53 20:35	04:49 21:34	04:25 22:08	04:57 21:44	05:56 20:38	06:58 19:16	07:59 17:58	08:05 15:55	08:46 15:39
23	08:28 16:25	07:24 17:33	06:11 18:33	05:51 20:37	04:48 21:36	04:25 22:08	04:58 21:42	05:58 20:35	07:00 19:13	08:01 17:56	08:07 15:54	08:47 15:39
24	08:26 16:27	07:21 17:35	06:09 18:35	05:48 20:39	04:46 21:38	04:25 22:08	05:00 21:40	06:00 20:33	07:02 19:11	08:03 17:53	08:09 15:52	08:47 15:40
25	08:25 16:29	07:19 17:37	06:06 18:37	05:46 20:41	04:44 21:39	04:26 22:08	05:02 21:39	06:02 20:30	07:04 19:08	07:05 16:51	08:11 15:51	08:48 15:41
26	08:23 16:31	07:16 17:40	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:04 21:37	06:04 20:28	07:06 19:05	07:08 16:49	08:13 15:50	08:48 15:41
27	08:22 16:33	07:14 17:42	06:01 18:41	05:41 20:45	04:42 21:42	04:27 22:08	05:05 21:35	06:06 20:25	07:08 19:03	07:10 16:46	08:15 15:49	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:10 19:00	07:12 16:44	08:16 15:47	08:48 15:43
29	08:18 16:38		06:55 19:45	05:36 20:49	04:39 21:46	04:28 22:07	05:09 21:31	06:10 20:20	07:12 18:57	07:14 16:42	08:18 15:46	08:48 15:44
30	08:16 16:40		06:53 19:47	05:34 20:51	04:38 21:47	04:29 22:07	05:11 21:29	06:12 20:17	07:14 18:55	07:16 16:39	08:20 15:45	08:48 15:45
31	08:14 16:42		06:50 19:49		04:36 21:49		05:13 21:28	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Rapš i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (488)  
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:46	08:12 16:43	07:09 17:45	06:47 19:51	18:45 (PrRR3) 23 19:08 (PrRR3)	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:51	07:20 16:34
2	08:48 15:47	08:10 16:45	07:06 17:48	06:44 19:53	18:45 (PrRR3) 22 19:07 (PrRR3)	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	18:45 (PrRR3) 20 19:05 (PrRR3)	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	07:25 16:30
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	18:46 (PrRR3) 18 19:04 (PrRR3)	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	07:21 18:43	07:27 16:27
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	18:48 (PrRR3) 14 19:02 (PrRR3)	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	07:23 18:41	07:29 16:25
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	18:51 (PrRR3) 9 19:00 (PrRR3)	05:19 21:03	04:29 21:57	04:33 22:03	05:23 21:15	06:25 19:59	18:46 (PrRR3) 9 18:55 (PrRR3)	07:25 18:38
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	18:51 (PrRR3) 21:05	05:17 21:58	04:28 22:03	04:34 21:13	05:25 21:13	06:27 19:56	18:43 (PrRR3) 14 18:56 (PrRR3)	07:27 18:36
8	08:45 15:56	07:58 16:59	06:50 18:01	06:28 20:05	18:41 (PrRR3) 21:07	05:15 21:59	04:27 22:02	05:27 21:11	06:29 19:53	18:41 (PrRR3) 18 18:59 (PrRR3)	07:29 18:33	07:35 16:19
9	08:44 15:58	07:56 17:01	06:48 18:03	06:25 20:07	18:39 (PrRR3) 21:09	05:13 22:00	04:27 22:01	05:29 21:08	06:31 19:51	18:39 (PrRR3) 20 18:59 (PrRR3)	07:31 18:30	07:38 16:17
10	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:09	18:37 (PrRR3) 21:11	05:11 22:01	04:26 22:00	05:31 21:06	06:33 19:48	18:38 (PrRR3) 22 19:00 (PrRR3)	07:33 18:28	07:40 16:15
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	18:37 (PrRR3) 21:13	05:09 22:02	04:39 21:59	05:33 21:04	06:35 19:45	18:37 (PrRR3) 23 19:00 (PrRR3)	07:36 18:25	07:42 16:13
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	18:36 (PrRR3) 21:15	05:07 22:03	04:40 21:58	05:35 21:01	06:37 19:43	18:36 (PrRR3) 24 19:00 (PrRR3)	07:38 18:23	07:44 16:11
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	18:36 (PrRR3) 21:17	05:05 22:03	04:41 21:57	05:37 20:59	06:39 19:40	18:36 (PrRR3) 24 19:00 (PrRR3)	07:40 18:20	07:46 16:09
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	18:36 (PrRR3) 21:19	05:03 22:04	04:43 21:55	05:39 20:57	06:41 19:37	18:36 (PrRR3) 24 19:00 (PrRR3)	07:42 18:17	07:48 16:07
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	18:35 (PrRR3) 21:21	05:01 22:05	04:44 21:54	05:41 20:54	06:43 19:34	18:35 (PrRR3) 25 19:00 (PrRR3)	07:44 18:15	07:50 16:06
16	08:38 16:10	07:40 17:17	06:29 18:17	06:07 20:22	18:35 (PrRR3) 21:23	04:59 22:05	04:46 21:53	05:43 20:52	06:45 19:32	18:35 (PrRR3) 24 18:59 (PrRR3)	07:46 18:12	07:53 16:04
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	18:36 (PrRR3) 21:25	04:57 22:06	04:47 21:51	05:45 20:50	06:47 19:29	18:36 (PrRR3) 22 18:58 (PrRR3)	07:48 18:10	07:55 16:02
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	18:35 (PrRR3) 21:27	04:55 22:06	04:49 21:50	05:47 20:47	06:49 19:26	18:35 (PrRR3) 21 18:56 (PrRR3)	07:50 18:07	07:57 16:00
19	08:34 16:16	07:33 17:23	06:21 18:24	06:00 20:28	18:35 (PrRR3) 21:29	04:53 22:07	04:51 21:49	05:49 20:45	06:51 19:24	18:36 (PrRR3) 17 18:53 (PrRR3)	07:52 18:05	07:59 15:59
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	18:36 (PrRR3) 21:30	04:51 22:07	04:52 21:47	05:51 20:42	06:53 19:21	18:38 (PrRR3) 12 18:50 (PrRR3)	07:54 18:02	08:01 15:57
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	18:37 (PrRR3) 21:32	04:50 22:07	04:54 21:45	05:53 20:40	06:55 19:18	18:40 (PrRR3) 8 18:48 (PrRR3)	07:57 18:00	08:03 15:56
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	18:38 (PrRR3) 21:34	04:48 22:08	04:56 21:44	05:55 20:37	06:57 19:16	18:48 (PrRR3) 17:57	07:59 15:54	08:05 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	18:39 (PrRR3) 21:36	04:46 22:08	04:57 21:42	05:57 20:35	06:59 19:13	18:49 (PrRR3) 17:55	08:01 15:53	08:07 15:38
24	08:26 16:26	07:21 17:34	06:08 18:34	05:47 20:39	18:40 (PrRR3) 21:38	04:45 22:08	04:59 21:40	05:59 20:32	07:01 19:10	18:50 (PrRR3) 17:53	08:09 15:51	08:17 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	18:41 (PrRR3) 21:39	04:43 22:08	05:01 21:39	06:01 20:30	07:03 19:08	18:51 (PrRR3) 16:50	08:11 15:50	08:18 15:39
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	18:42 (PrRR3) 21:41	04:42 22:08	05:03 21:37	06:03 20:27	07:05 19:05	18:52 (PrRR3) 16:47	08:13 15:49	08:48 15:40
27	08:21 16:32	07:14 17:41	06:00 18:40	05:40 20:45	18:43 (PrRR3) 21:42	04:40 22:08	05:04 21:35	06:05 20:25	07:07 19:02	18:53 (PrRR3) 16:45	08:15 15:47	08:48 15:41
28	08:20 16:34	07:11 17:43	05:57 18:42	05:38 20:47	18:44 (PrRR3) 21:44	04:39 22:07	05:06 21:33	06:07 20:22	07:09 18:59	18:54 (PrRR3) 16:43	08:16 15:46	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	18:45 (PrRR3) 21:46	04:38 22:07	05:08 21:31	06:09 20:20	07:11 18:57		07:14 16:41	08:18 15:45
30	08:16 16:39		06:52 19:47	05:33 20:51	18:46 (PrRR3) 21:47	04:36 22:07	05:10 21:29	06:11 20:17	07:13 18:54		07:16 16:38	08:20 15:44
31	08:14 16:41		06:49 19:49	05:31 20:51	18:47 (PrRR3) 21:49	04:35 21:27	05:12 21:27	06:13 20:14			07:18 16:36	08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case			195	106					307			
Sun reduction			0,39	0,44					0,43			
Oper. time red.			1,00	1,00					1,00			
Wind dir. red.			1,00	1,00					1,00			
Total reduction			0,39	0,44					0,43			
Total, real			76	47					132			

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Riteniš i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (496)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	January	February	March	April	May	June
1	08:48	08:12	07:09	06:47	05:31	04:34
	15:46	16:43	17:45	19:51	20:53	21:50
2	08:48	08:10	07:06	06:44	05:28	04:33
	15:48	16:46	17:48	19:53	20:55	21:51
3	08:48	08:08	07:03	06:41	05:26	04:32
	15:49	16:48	17:50	19:55	20:57	21:53
4	08:47	08:06	07:01	06:39	05:24	04:31
	15:50	16:50	17:52	19:57	20:59	21:54
5	08:47	08:04	06:58	06:36	05:22	04:30
	15:52	16:52	17:54	19:59	21:01	21:55
6	08:46	08:02	06:56	06:33	05:19	04:29
	15:53	16:54	17:56	20:01	21:03	21:56
7	08:46	08:00	06:53	06:31	05:17	04:28
	15:55	16:57	17:58	20:03	21:05	21:58
8	08:45	07:58	06:50	06:28	05:15	04:28
	15:56	16:59	18:01	20:05	21:07	21:59
9	08:44	07:56	06:48	06:26	19:31 (AP2)	05:13
	15:58	17:01	18:03	20:07	8 19:39 (AP2)	21:09
10	08:44	07:54	06:45	06:23	19:28 (AP2)	05:11
	15:59	17:03	18:05	20:09	12 19:40 (AP2)	21:11
11	08:43	07:52	06:43	06:20	19:27 (AP2)	05:09
	16:01	17:06	18:07	20:12	16 19:43 (AP2)	21:13
12	08:42	07:49	06:40	06:18	19:25 (AP2)	05:07
	16:03	17:08	18:09	20:14	19 19:44 (AP2)	21:15
13	08:41	07:47	06:37	06:15	19:25 (AP2)	05:05
	16:04	17:10	18:11	20:16	21 19:46 (AP2)	21:17
14	08:40	07:45	06:35	06:13	19:23 (AP2)	05:03
	16:06	17:12	18:13	20:18	22 19:45 (AP2)	21:19
15	08:39	07:43	06:32	06:10	19:23 (AP2)	05:01
	16:08	17:15	18:15	20:20	23 19:46 (AP2)	21:21
16	08:38	07:40	06:29	06:07	19:23 (AP2)	04:59
	16:10	17:17	18:18	20:22	22 19:45 (AP2)	21:23
17	08:36	07:38	06:27	06:05	19:23 (AP2)	04:57
	16:12	17:19	18:20	20:24	26 19:54 (AP6.1)	21:25
18	08:35	07:36	06:24	06:02	19:23 (AP2)	04:55
	16:14	17:21	18:22	20:26	29 19:56 (AP6.1)	21:27
19	08:34	07:33	06:21	06:00	19:23 (AP2)	04:53
	16:16	17:24	18:24	20:28	32 19:58 (AP6.1)	21:29
20	08:32	07:31	06:19	05:57	19:23 (AP2)	04:52
	16:18	17:26	18:26	20:30	33 19:59 (AP6.1)	21:30
21	08:31	07:28	06:16	05:55	19:25 (AP2)	04:50
	16:20	17:28	18:28	20:32	33 20:02 (AP6.1)	21:32
22	08:29	07:26	06:13	05:52	19:26 (AP2)	04:48
	16:22	17:30	18:30	20:34	33 20:04 (AP6.1)	21:34
23	08:28	07:24	06:11	05:50	19:28 (AP2)	04:47
	16:24	17:32	18:32	20:36	28 20:03 (AP6.1)	21:36
24	08:26	07:21	06:08	05:47	19:45 (AP6.1)	04:45
	16:26	17:35	18:34	20:39	18 20:03 (AP6.1)	21:37
25	08:25	07:19	06:05	05:45	19:45 (AP6.1)	04:43
	16:28	17:37	18:36	20:41	18 20:03 (AP6.1)	21:39
26	08:23	07:16	06:03	05:42	19:45 (AP6.1)	04:42
	16:30	17:39	18:38	20:43	16 20:01 (AP6.1)	21:41
27	08:21	07:14	06:00	05:40	19:46 (AP6.1)	04:41
	16:32	17:41	18:40	20:45	14 20:00 (AP6.1)	21:42
28	08:20	07:11	05:57	05:38	19:47 (AP6.1)	04:39
	16:35	17:43	18:42	20:47	12 19:59 (AP6.1)	21:44
29	08:18		06:55	05:35	19:50 (AP6.1)	04:38
	16:37		19:45	20:49	7 19:57 (AP6.1)	21:46
30	08:16		06:52	05:33		04:37
	16:39		19:47	20:51		21:47
31	08:14		06:49			04:35
	16:41		19:49			21:49
Potential sun hours	236	266	366	426	507	528
Total, worst case				442		252
Sun reduction				0,44		0,57
Oper. time red.				1,00		1,00
Wind dir. red.				1,00		1,00
Total reduction				0,44		0,57
Total, real				195		143

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Riteniš i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (496)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:28 22:06 9	21:18 (Pr3a) 21:27 (Pr3a) 21:25	05:14 21:25	06:15 20:12 15	19:26 (AP2) 19:41 (AP2) 18:52	07:15 16:34 15:43
2	04:29 22:06 8	21:18 (Pr3a) 21:26 (Pr3a) 21:23	05:16 21:23	06:17 20:09 12	19:27 (AP2) 19:39 (AP2) 18:49	16:34 16:32 15:42
3	04:30 22:05 6	21:19 (Pr3a) 21:25 (Pr3a) 21:21	05:18 21:21	06:19 20:06 8	19:29 (AP2) 19:37 (AP2) 18:46	16:32 16:30 15:41
4	04:31 22:05 4	21:21 (Pr3a) 21:25 (Pr3a) 21:19	05:20 21:19	06:21 20:04	18:46 07:21 16:27	15:41 08:27 15:41
5	04:32 22:04 2	21:23 (Pr3a) 21:25 (Pr3a) 21:17	05:22 21:17	06:23 20:01	07:23 18:41 16:25	08:28 15:40 15:40
6	04:33 22:03	05:23 21:15	06:25 19:59	07:25 18:38	16:25 16:23	15:40 15:39
7	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	16:23 16:21	15:39 15:39
8	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	16:21 16:19	15:39 15:38
9	04:36 22:01	05:29 21:08	06:31 19:51	07:31 18:30	16:19 16:17	15:38 15:37
10	04:38 22:00	05:31 21:06	06:33 19:48	07:33 18:28	16:17 16:15	15:37 15:37
11	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	16:15 16:13	15:37 15:37
12	04:40 21:58	05:35 21:01	06:37 19:43	07:38 18:23	16:13 16:11	15:37 15:36
13	04:42 21:57	05:37 20:59	06:39 19:40	07:40 18:20	16:11 16:09	15:36 15:36
14	04:43 21:55	05:39 20:57	19:56 (AP6.1) 20:05 (AP6.1)	06:41 19:37	16:09 16:08	15:36 15:36
15	04:45 21:54	05:41 20:54	19:55 (AP6.1) 20:07 (AP6.1)	06:43 19:34	16:08 16:06	15:36 15:36
16	04:46 21:53	05:43 20:52	19:53 (AP6.1) 20:08 (AP6.1)	06:45 19:32	16:06 16:04	15:36 15:36
17	04:48 21:51	05:45 20:50	19:52 (AP6.1) 20:09 (AP6.1)	06:47 19:29	16:04 16:02	15:36 15:36
18	04:49 21:50	05:47 20:47	19:51 (AP6.1) 20:08 (AP6.1)	06:49 19:26	16:02 16:01	15:36 15:36
19	04:51 21:48	05:49 20:45	19:50 (AP6.1) 20:09 (AP6.1)	06:51 19:24	16:01 15:59	15:36 15:37
20	04:52 21:47	05:51 20:42	19:33 (AP2) 20:09 (AP6.1)	06:53 19:21	15:59 15:57	15:37 15:37
21	04:54 21:45	05:53 20:40	19:31 (AP2) 20:08 (AP6.1)	06:55 19:18	15:57 15:56	15:37 15:37
22	04:56 21:44	05:55 20:37	19:29 (AP2) 20:06 (AP6.1)	06:57 19:16	15:56 15:54	15:37 15:38
23	04:57 21:42	05:57 20:35	19:28 (AP2) 20:04 (AP6.1)	06:59 19:13	15:54 15:53	15:38 15:38
24	04:59 21:40	05:59 20:32	19:27 (AP2) 20:02 (AP6.1)	07:01 19:10	15:53 15:51	15:38 15:39
25	05:01 21:39	06:01 20:30	19:26 (AP2) 19:59 (AP6.1)	07:03 19:08	15:51 15:50	15:39 15:39
26	05:03 21:37	06:03 20:27	19:25 (AP2) 19:56 (AP6.1)	07:05 19:05	15:50 15:49	15:39 15:40
27	05:04 21:35	06:05 20:25	19:24 (AP2) 19:47 (AP2)	07:07 19:02	15:48 15:48	15:40 15:41
28	05:06 21:33	06:07 20:22	19:24 (AP2) 19:47 (AP2)	07:09 19:00	15:48 15:46	15:41 15:42
29	05:08 21:31	06:09 20:20	19:24 (AP2) 19:46 (AP2)	07:11 18:57	15:46 15:45	15:42 15:43
30	05:10 21:29	06:11 20:17	19:24 (AP2) 19:46 (AP2)	07:13 18:54	15:44 15:44	15:43 15:44
31	05:12 21:27	06:13 20:14	19:25 (AP2) 19:44 (AP2)	07:18 16:36	15:44 15:45	15:44 15:45
Potential sun hours	529	469	384	324	248	217
Total, worst case	29	411	35			
Sun reduction	0,47	0,52	0,43			
Oper. time red.	1,00	1,00	1,00			
Wind dir. red.	1,00	1,00	1,00			
Total reduction	0,47	0,52	0,43			
Total, real	14	215	15			

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

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

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

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0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Robež nieki - Shadow Receptor:  $1,0 \times 1,0$  Azimuth:  $3,1^\circ$  Slope:  $90,0^\circ$  (432)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:49	08:13	07:09	06:47	05:31	04:35	04:29	05:14	06:16	07:16	07:21	08:22
	15:47	16:44	17:46	19:51	20:53	21:50	22:07	21:26	20:12	18:52	16:35	15:44
2	08:48	08:11	07:06	06:45	05:29	04:34	04:30	05:16	06:18	07:18	07:23	08:24
	15:48	16:46	17:48	19:53	20:55	21:52	22:06	21:24	20:10	18:49	16:32	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:18	06:20	07:20	07:25	08:25
	15:50	16:48	17:50	19:55	20:58	21:53	22:06	21:22	20:07	18:47	16:30	15:42
4	08:48	08:07	07:01	06:39	05:24	04:32	04:32	05:20	06:22	07:22	07:27	08:27
	15:51	16:51	17:52	19:57	21:00	21:54	22:05	21:20	20:04	18:44	16:28	15:41
5	08:47	08:05	06:59	06:37	05:22	04:31	04:33	05:22	06:24	07:24	07:29	08:29
	15:52	16:53	17:55	20:00	21:02	21:56	22:04	21:17	20:02	18:41	16:26	15:40
6	08:47	08:03	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:02	21:04	21:57	22:04	21:15	19:59	18:39	16:24	15:40
7	08:46	08:01	06:54	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:34	08:32
	15:55	16:57	17:59	20:04	21:06	21:58	22:03	21:13	19:56	18:36	16:22	15:39
8	08:45	07:59	06:51	06:29	05:16	04:28	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	17:00	18:01	20:06	21:08	21:59	22:02	21:11	19:54	18:33	16:20	15:39
9	08:45	07:56	06:48	06:26	05:13	04:27	04:37	05:30	06:32	07:32	07:38	08:34
	15:58	17:02	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:31	16:18	15:38
10	08:44	07:54	06:46	06:23	05:11	04:27	04:38	05:32	06:34	07:34	07:40	08:36
	16:00	17:04	18:05	20:10	21:12	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:09	04:26	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:46	18:26	16:14	15:37
12	08:42	07:50	06:40	06:18	05:07	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:03	17:08	18:10	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:12	15:37
13	08:41	07:48	06:38	06:16	05:05	04:25	04:42	05:38	06:40	07:40	07:47	08:39
	16:05	17:11	18:12	20:16	21:18	22:04	21:57	21:00	19:40	18:21	16:10	15:37
14	08:40	07:45	06:35	06:13	05:03	04:25	04:44	05:40	06:42	07:42	07:49	08:40
	16:07	17:13	18:14	20:18	21:20	22:04	21:56	20:57	19:38	18:18	16:08	15:37
15	08:39	07:43	06:33	06:10	05:01	04:25	04:45	05:42	06:44	07:44	07:51	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:37
16	08:38	07:41	06:30	06:08	04:59	04:24	04:47	05:44	06:46	07:46	07:53	08:42
	16:11	17:17	18:18	20:22	21:23	22:06	21:53	20:52	19:32	18:13	16:05	15:37
17	08:37	07:38	06:27	06:05	04:58	04:24	04:48	05:46	06:48	07:48	07:55	08:43
	16:13	17:20	18:20	20:24	21:25	22:06	21:52	20:50	19:30	18:10	16:03	15:37
18	08:35	07:36	06:25	06:03	04:56	04:24	04:50	05:48	06:50	07:51	07:57	08:44
	16:14	17:22	18:22	20:26	21:27	22:07	21:50	20:48	19:27	18:08	16:01	15:37
19	08:34	07:34	06:22	06:00	04:54	04:24	04:51	05:50	06:52	07:53	07:59	08:45
	16:16	17:24	18:24	20:29	21:29	22:07	21:49	20:45	19:24	18:05	16:00	15:37
20	08:33	07:31	06:19	05:58	04:52	04:24	04:53	05:52	06:54	07:55	08:01	08:46
	16:18	17:26	18:26	20:31	21:31	22:07	21:47	20:43	19:21	18:03	15:58	15:37
21	08:31	07:29	06:17	05:55	04:50	04:24	04:55	05:54	06:56	07:57	08:03	08:46
	16:20	17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:19	18:00	15:56	15:38
22	08:30	07:26	06:14	05:53	04:49	04:24	04:56	05:56	06:58	07:59	08:05	08:47
	16:22	17:31	18:31	20:35	21:34	22:08	21:44	20:38	19:16	17:58	15:55	15:38
23	08:28	07:24	06:11	05:50	04:47	04:25	04:58	05:58	07:00	08:01	08:07	08:47
	16:25	17:33	18:33	20:37	21:36	22:08	21:42	20:35	19:13	17:56	15:53	15:39
24	08:27	07:21	06:09	05:48	04:46	04:25	05:00	06:00	07:01	08:03	08:09	08:48
	16:27	17:35	18:35	20:39	21:38	22:08	21:41	20:33	19:11	17:53	15:52	15:39
25	08:25	07:19	06:06	05:45	04:44	04:25	05:02	06:02	07:03	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:40
26	08:23	07:17	06:03	05:43	04:43	04:26	05:03	06:04	07:05	08:08	08:13	08:48
	16:31	17:39	18:39	20:43	21:41	22:08	21:37	20:28	19:05	16:48	15:49	15:41
27	08:22	07:14	06:01	05:41	04:41	04:26	05:05	06:06	07:08	08:10	08:15	08:49
	16:33	17:42	18:41	20:45	21:43	22:08	21:35	20:25	19:03	16:46	15:48	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:10	08:12	08:17	08:49
	16:35	17:44	18:43	20:47	21:44	22:08	21:34	20:23	19:00	16:44	15:47	15:43
29	08:18		06:55	05:36	04:38	04:28	05:09	06:10	07:12	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:07	21:32	20:20	18:57	16:41	15:46	15:43
30	08:16		06:52	05:34	04:37	04:28	05:11	06:12	07:14	08:16	08:20	08:49
	16:40		19:47	20:51	21:47	22:07	21:30	20:17	18:55	16:39	15:45	15:44
31	08:15		06:50		04:36		05:13	06:14		07:18		08:49
	16:42		19:49		21:49		21:28	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Rozes - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (428)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January			February			March			April			May			June		
1	08:48	14:53 (P19.2b)	08:13				07:09	16:10 (DD3)	06:47		18:54 (O3)	05:31	04:35					
	15:47	11	15:04 (P19.2b)	16:44			17:46	29	16:39 (DD3)	19:51	22	19:16 (O3)	20:53	21:50				
2	08:48	14:53 (P19.2b)	08:11				07:06		16:10 (DD3)	06:44		18:53 (O3)	05:29	04:34				
	15:48	13	15:06 (P19.2b)	16:46			17:48	28	16:38 (DD3)	19:53	22	19:15 (O3)	20:55	21:51				
3	08:48	14:53 (P19.2b)	08:09				07:04		16:12 (DD3)	06:42		18:54 (O3)	05:27	04:33				
	15:50	14	15:07 (P19.2b)	16:48			17:50	25	16:37 (DD3)	19:55	21	19:15 (O3)	20:57	21:53				
4	08:47	14:54 (P19.2b)	08:07				07:01		16:13 (DD3)	06:39		18:54 (O3)	05:24	04:32				
	15:51	15	15:09 (P19.2b)	16:51			17:52	22	16:35 (DD3)	19:57	20	19:14 (O3)	20:59	21:54				
5	08:47	14:54 (P19.2b)	08:05				06:59		16:14 (DD3)	06:37		18:55 (O3)	05:22	04:31				
	15:52	17	15:11 (P19.2b)	16:53			17:55	19	16:33 (DD3)	19:59	18	19:13 (O3)	21:01	21:55				
6	08:46	14:54 (P19.2b)	08:03				06:56		16:18 (DD3)	06:34		18:56 (O3)	05:20	04:30				
	15:54	18	15:12 (P19.2b)	16:55			17:57	12	16:30 (DD3)	20:01	15	19:11 (O3)	21:03	21:56				
7	08:46	14:54 (P19.2b)	08:00				06:53			06:31		18:57 (O3)	05:18	04:29				
	15:55	19	15:13 (P19.2b)	16:57			17:59			20:04	12	19:09 (O3)	21:05	21:58				
8	08:45	14:54 (P19.2b)	07:58				06:51		17:24 (DD1)	06:29		19:01 (O3)	05:16	04:28				
	15:57	19	15:13 (P19.2b)	17:00			18:01	8	17:32 (DD1)	20:06	4	19:05 (O3)	21:07	21:59				
9	08:44	14:54 (P19.2b)	07:56				06:48		17:22 (DD1)	06:26		19:34 (O2)	05:13	04:28				
	15:58	20	15:14 (P19.2b)	17:02			18:03	13	17:35 (DD1)	20:08	4	19:38 (O2)	21:09	22:00				
10	08:44	14:54 (P19.2b)	07:54			16:26 (O5)	06:46		17:20 (DD1)	06:23		19:32 (O2)	05:11	04:27				
	16:00	21	15:15 (P19.2b)	17:04	6	16:32 (O5)	18:05	17	17:37 (DD1)	20:10	9	19:41 (O2)	21:11	22:01				
11	08:43	14:54 (P19.2b)	07:52			16:24 (O5)	06:43		17:18 (DD1)	06:21		19:30 (O2)	05:09	04:26				
	16:02	22	15:16 (P19.2b)	17:06	10	16:34 (O5)	18:07	20	17:38 (DD1)	20:12	12	19:42 (O2)	21:13	22:02				
12	08:42	14:55 (P19.2b)	07:50			16:23 (O5)	06:40		17:18 (DD1)	06:18		19:29 (O2)	05:07	04:26				
	16:03	21	15:16 (P19.2b)	17:08	14	16:37 (O5)	18:09	21	17:39 (DD1)	20:14	16	19:45 (O2)	21:15	22:03				
13	08:41	14:55 (P19.2b)	07:47			16:22 (DD3)	06:38		17:17 (DD1)	06:16		19:28 (O2)	05:05	04:25				
	16:05	22	15:17 (P19.2b)	17:11	17	16:39 (O5)	18:12	22	17:39 (DD1)	20:16	18	19:46 (O2)	21:17	22:03				
14	08:40	14:55 (P19.2b)	07:45			16:18 (DD3)	06:35		17:16 (DD1)	06:13		19:28 (O2)	05:03	04:25				
	16:07	22	15:17 (P19.2b)	17:13	23	16:41 (O5)	18:14	23	17:39 (DD1)	20:18	20	19:48 (O2)	21:19	22:04				
15	08:39	14:56 (P19.2b)	07:43			16:16 (DD3)	06:32		17:16 (DD1)	06:10		19:27 (O2)	05:01	04:25				
	16:09	22	15:18 (P19.2b)	17:15	26	16:42 (O5)	18:16	24	17:40 (DD1)	20:20	20	19:47 (O2)	21:21	22:05				
16	08:38	14:56 (P19.2b)	07:41			16:14 (DD3)	06:30		17:15 (DD1)	06:08		19:27 (O2)	04:59	04:25				
	16:11	21	15:17 (P19.2b)	17:17	27	16:41 (O5)	18:18	24	17:39 (DD1)	20:22	20	19:47 (O2)	21:23	22:05				
17	08:36	14:57 (P19.2b)	07:38			16:13 (DD3)	06:27		17:15 (DD1)	06:05		19:26 (O2)	04:58	04:24				
	16:13	21	15:18 (P19.2b)	17:20	29	16:42 (O5)	18:20	23	17:38 (DD1)	20:24	20	19:46 (O2)	21:25	22:06				
18	08:35	14:57 (P19.2b)	07:36			16:11 (DD3)	06:24		17:16 (DD1)	06:03		19:27 (O2)	04:56	04:24				
	16:15	21	15:18 (P19.2b)	17:22	30	16:41 (O5)	18:22	22	17:38 (DD1)	20:26	19	19:46 (O2)	21:27	22:06				
19	08:34	14:58 (P19.2b)	07:33			16:11 (DD3)	06:22		17:16 (DD1)	06:00		19:27 (O2)	04:54	04:24				
	16:16	20	15:18 (P19.2b)	17:24	31	16:42 (O5)	18:24	20	17:36 (DD1)	20:28	17	19:44 (O2)	21:29	22:07				
20	08:32	14:58 (P19.2b)	07:31			16:10 (DD3)	06:19		17:17 (DD1)	05:58		19:28 (O2)	04:52	04:24				
	16:18	20	15:18 (P19.2b)	17:26	31	16:41 (DD3)	18:26	18	17:35 (DD1)	20:30	15	19:43 (O2)	21:31	22:07				
21	08:31	14:59 (P19.2b)	07:29			16:10 (DD3)	06:16		17:19 (DD1)	05:55		19:30 (O2)	04:51	04:24				
	16:21	19	15:18 (P19.2b)	17:28	32	16:42 (DD3)	18:28	14	17:33 (DD1)	20:33	12	19:42 (O2)	21:32	22:07				
22	08:30	15:00 (P19.2b)	07:26			16:09 (DD3)	06:14		17:22 (DD1)	05:53		19:32 (O2)	04:49	04:25				
	16:23	18	15:18 (P19.2b)	17:31	32	16:41 (DD3)	18:30	8	17:30 (DD1)	20:35	7	19:39 (O2)	21:34	22:08				
23	08:28	15:01 (P19.2b)	07:24			16:09 (DD3)	06:11			05:50			04:47	04:25				
	16:25	16	15:17 (P19.2b)	17:33	33	16:42 (DD3)	18:32			20:37			21:36	22:08				
24	08:27	15:02 (P19.2b)	07:21			16:09 (DD3)	06:08			05:48			04:46	04:25				
	16:27	14	15:16 (P19.2b)	17:35	33	16:42 (DD3)	18:35			20:39			21:38	22:08				
25	08:25	15:04 (P19.2b)	07:19			16:08 (DD3)	06:06		18:06 (O3)	05:45			04:44	04:25				
	16:29	11	15:15 (P19.2b)	17:37	33	16:41 (DD3)	18:37	3	18:09 (O3)	20:41			21:39	22:08				
26	08:23	15:07 (P19.2b)	07:16			16:09 (DD3)	06:03		18:01 (O3)	05:43			04:43	04:26				
	16:31	5	15:12 (P19.2b)	17:39	32	16:41 (DD3)	18:39	10	18:11 (O3)	20:43			21:41	22:08				
27	08:22		07:14			16:09 (DD3)	06:00		17:58 (O3)	05:41			04:41	04:26				
	16:33		17:42	31	16:40 (DD3)	18:41	14	18:12 (O3)	20:45				21:43	22:08				
28	08:20		07:11			16:10 (DD3)	05:58		17:58 (O3)	05:38			04:40	04:27				
	16:35		17:44	30	16:40 (DD3)	18:43	17	18:15 (O3)	20:47				21:44	22:07				
29	08:18					06:55			18:56 (O3)	05:36			04:39	04:28				
	16:37					19:45	20	19:16 (O3)	20:49				21:46	22:07				
30	08:16					06:52			18:55 (O3)	05:34			04:37	04:28				
	16:40					19:47	21	19:16 (O3)	20:51				21:47	22:07				
31	08:14					06:50			18:55 (O3)				04:36					
	16:42					19:49	22	19:17 (O3)					21:49					
Potential sun hours	236			266			366			426			507		528			
Total, worst case		462			500			519			343							
Sun reduction		0,13			0,22			0,39			0,44							
Oper. time red.		1,00			1,00			1,00			1,00							
Wind dir. red.		1,00			1,00			1,00			1,00							
Total reduction		0,13			0,22			0,39			0,44							
Total, real		62			112			203			152							

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Rozes - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (428)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:29 22:06	05:14 21:26	06:16 20:12	19:29 (O2) 07:15	17:56 (DD1) 07:20	15:57 (O5) 08:22
2	04:30 22:06	05:16 21:24	06:18 20:09	19:30 (O2) 07:17	18:19 (DD1) 07:23	16:01 (O5) 08:23
3	04:31 22:05	05:18 21:21	06:20 20:07	19:32 (O2) 07:20	18:18 (DD1) 07:25	15:43 08:25
4	04:32 22:05	05:20 21:19	06:22 20:04	19:36 (O2) 07:22	18:16 (DD1) 07:27	15:42 08:27
5	04:33 22:04	05:22 21:17	06:24 20:02	19:02 (O3) 07:24	18:13 (DD1) 07:29	15:41 08:28
6	04:34 22:03	05:24 21:15	06:26 19:59	18:54 (O3) 07:26	18:00 (DD1) 07:31	15:41 08:30
7	04:35 22:03	05:26 21:13	06:28 19:56	19:08 (O3) 07:28	18:06 (DD1) 07:33	15:40 08:31
8	04:36 22:02	05:28 21:11	06:30 19:54	18:47 (O3) 07:30	17:03 (DD3) 07:36	15:39 08:33
9	04:37 22:01	05:30 21:08	06:32 19:51	18:49 (O3) 07:32	16:51 (DD3) 07:38	15:39 08:34
10	04:38 22:00	05:32 21:06	06:34 19:48	18:48 (O3) 07:34	16:49 (DD3) 07:40	15:38 08:35
11	04:40 21:59	05:34 21:04	06:36 19:46	18:47 (O3) 07:36	16:47 (DD3) 07:42	15:38 08:37
12	04:41 21:58	05:36 21:02	06:38 19:43	18:46 (O3) 07:38	16:45 (DD3) 07:44	15:37 08:38
13	04:42 21:57	05:38 20:59	06:40 19:40	18:46 (O3) 07:40	16:44 (DD3) 07:46	15:37 08:39
14	04:44 21:55	05:40 20:57	06:42 19:38	18:47 (O3) 07:42	16:42 (DD3) 07:48	15:37 08:40
15	04:45 21:54	05:42 20:55	06:44 19:35	18:46 (O3) 07:44	16:41 (DD3) 07:51	15:37 08:41
16	04:47 21:53	05:44 20:52	06:46 19:32	18:45 (O3) 07:46	16:40 (DD3) 07:53	15:37 08:42
17	04:48 21:51	05:46 20:50	06:48 19:29	18:44 (O3) 07:48	16:41 (DD3) 07:55	15:37 08:43
18	04:50 21:50	05:48 20:47	06:49 19:27	18:43 (O3) 07:50	16:40 (DD3) 07:57	15:37 08:44
19	04:51 21:49	05:50 20:45	06:51 19:24	18:57 (O3) 07:53	16:40 (DD3) 07:59	15:37 08:45
20	04:53 21:47	05:52 20:43	06:53 19:21	18:05 (DD1) 07:55	16:40 (DD3) 08:01	15:37 08:45
21	04:55 21:45	05:54 20:40	19:37 (O2) 06:55	18:09 (DD1) 07:57	16:40 (DD3) 08:03	15:38 08:46
22	04:56 21:44	05:56 20:38	19:45 (O2) 06:57	18:14 (DD1) 07:59	16:40 (DD3) 08:05	15:38 08:47
23	04:58 21:42	05:58 20:35	19:33 (O2) 06:59	18:05 (DD1) 07:59	16:40 (DD3) 08:07	15:38 08:47
24	05:00 21:41	06:00 20:33	19:32 (O2) 07:01	18:02 (DD1) 08:01	16:42 (DD3) 08:09	15:39 08:47
25	05:02 21:39	06:02 20:30	19:31 (O2) 07:03	18:01 (DD1) 08:03	16:42 (DD3) 08:11	15:40 08:48
26	05:03 21:37	06:04 20:27	19:48 (O2) 07:05	18:20 (DD1) 07:53	17:12 (O5) 08:13	15:40 08:48
27	05:05 21:35	06:06 20:25	19:49 (O2) 07:07	18:21 (DD1) 07:10	16:11 (O5) 08:15	15:41 08:48
28	05:07 21:33	06:08 20:22	19:29 (O2) 07:09	18:21 (DD1) 07:12	15:46 (DD3) 08:16	15:42 08:48
29	05:09 21:31	06:10 20:20	19:49 (O2) 07:11	18:21 (DD1) 07:14	15:48 (DD3) 08:18	15:43 08:48
30	05:11 21:30	06:12 20:17	19:29 (O2) 07:13	18:20 (DD1) 07:16	15:52 (O5) 08:20	15:44 08:48
31	05:13 21:28	06:14 20:15	19:48 (O2) 07:15	18:19 (DD1) 07:18	16:08 (O5) 08:22	15:44 08:48
Potential sun hours	528	469	384	324	248	217
Total, worst case		185	464	734	277	316
Sun reduction		0,52	0,43	0,29	0,08	0,08
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		0,52	0,43	0,29	0,08	0,08
Total, real		97	200	213	21	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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Rož ulejas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (425)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:14 21:25	06:16 20:12	07:15 18:52	07:20 16:35	08:22 15:44
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:16 21:23	06:18 20:09	07:17 18:49	07:22 16:32	08:23 15:43
3	08:48 15:50	08:09 16:48	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:18 21:21	06:20 20:07	07:19 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:51	07:01 17:52	06:39 19:57	05:24 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:53	06:58 17:54	06:36 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:01	07:23 18:41	07:29 16:26	08:28 15:40
6	08:46 15:54	08:02 16:55	06:56 17:57	06:34 20:01	05:20 21:03	04:30 21:56	04:34 22:03	05:24 21:15	06:26 20:01	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:18 21:05	04:29 21:57	04:35 22:02	05:26 21:13	06:28 19:56	07:28 18:36	07:33 16:22	08:31 15:39
8	08:45 15:57	07:58 16:59	06:51 18:01	06:29 20:05	05:16 21:07	04:28 21:59	04:36 22:02	05:28 21:11	06:30 19:53	07:30 18:33	07:35 16:20	08:33 15:39
9	08:44 15:58	07:56 17:02	06:48 18:03	06:26 20:08	05:13 21:09	04:28 22:00	04:37 22:01	05:30 21:08	06:32 19:51	07:32 18:31	07:38 16:18	08:34 15:38
10	08:43 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:11	04:27 22:01	04:38 22:00	05:32 21:06	06:34 19:48	07:34 18:28	07:40 16:16	08:35 15:38
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:13	04:26 22:02	04:40 21:59	05:34 21:04	06:36 19:45	07:36 18:26	07:42 16:14	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:26 22:02	04:41 21:58	05:36 21:02	06:38 19:43	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:47 17:11	06:38 18:12	06:16 20:16	05:05 21:17	04:25 22:03	04:42 21:56	05:38 20:59	06:40 19:40	07:40 18:20	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:41 19:37	07:42 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:25 22:05	04:45 21:54	05:42 20:55	06:43 19:35	07:44 18:15	07:50 16:06	08:41 15:37
16	08:37 16:11	07:40 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:05	04:47 21:53	05:44 20:52	06:45 19:32	07:46 18:13	07:53 16:05	08:42 15:37
17	08:36 16:13	07:38 17:20	06:27 18:20	06:05 20:24	04:58 21:25	04:24 22:06	04:48 21:51	05:46 20:50	06:47 19:29	07:48 18:10	07:55 16:03	08:43 15:37
18	08:35 16:14	07:36 17:22	06:24 18:22	06:03 20:26	04:56 21:27	04:24 22:06	04:50 21:50	05:48 20:47	06:49 19:27	07:50 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:48	05:50 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:58 20:30	04:52 21:30	04:24 22:07	04:53 21:47	05:52 20:42	06:53 19:21	07:55 18:03	08:01 15:58	08:45 15:38
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:55 21:45	05:54 20:40	06:55 19:19	07:57 18:00	08:03 15:56	08:46 15:38
22	08:29 16:22	07:26 17:31	06:14 18:30	05:53 20:35	04:49 21:34	04:25 22:07	04:56 21:44	05:56 20:37	06:57 19:16	07:59 17:58	08:05 15:55	08:46 15:38
23	08:28 16:25	07:24 17:33	06:11 18:32	05:50 20:37	04:47 21:36	04:25 22:08	04:58 21:42	05:58 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:39
24	08:26 16:27	07:21 17:35	06:08 18:34	05:48 20:39	04:46 21:37	04:25 22:08	05:00 21:40	06:00 20:32	07:01 19:11	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:29	07:19 17:37	06:06 18:37	05:45 20:41	04:44 21:39	04:25 22:08	05:02 21:39	06:02 20:30	07:03 19:08	08:05 16:51	08:11 15:51	08:48 15:40
26	08:23 16:31	07:16 17:39	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:03 21:37	06:04 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:41
27	08:21 16:33	07:14 17:42	06:00 18:41	05:41 20:45	04:41 21:42	04:26 22:07	05:05 21:35	06:06 20:25	07:07 19:02	08:09 16:46	08:14 15:48	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:09 19:00	08:12 16:44	08:16 15:47	08:48 15:43
29	08:18 16:37		06:55 19:45	05:36 20:49	04:38 21:45	04:28 22:07	05:09 21:31	06:10 20:20	07:11 18:57	08:14 16:41	08:18 15:46	08:48 15:44
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:11 21:29	06:12 20:17	07:13 18:54	08:16 16:39	08:20 15:45	08:48 15:45
31	08:14 16:42		06:50 19:49		04:36 21:48		05:13 21:27	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Rubeni - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (450)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:13 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:15 21:26	06:16 20:12	07:16 18:52	07:20 16:35	08:22 15:44
2	08:48 15:49	08:11 16:46	07:06 17:48	06:45 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:17 21:24	06:18 20:09	07:18 18:49	07:23 16:33	08:23 15:43
3	08:48 15:50	08:09 16:49	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:19 21:21	06:20 20:07	07:20 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:51	07:01 17:53	06:39 19:57	05:25 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:22 18:44	07:27 16:28	08:27 15:42
5	08:47 15:53	08:05 16:53	06:59 17:55	06:37 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:02	07:24 18:41	07:29 16:26	08:28 15:41
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:02	05:20 21:03	04:30 21:56	04:34 22:03	05:24 21:15	06:26 19:59	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:56	08:01 16:58	06:54 17:59	06:31 20:04	05:18 21:05	04:29 21:58	04:35 22:03	05:26 21:13	06:28 19:56	07:28 18:36	07:33 16:22	08:31 15:40
8	08:45 15:57	07:58 17:00	06:51 18:01	06:29 20:06	05:16 21:07	04:29 21:59	04:36 22:02	05:28 21:11	06:30 19:54	07:30 18:34	07:36 16:20	08:33 15:39
9	08:44 15:59	07:56 17:02	06:48 18:03	06:26 20:08	05:14 21:09	04:28 22:00	04:38 22:01	05:30 21:09	06:32 19:51	07:32 18:31	07:38 16:18	08:34 15:39
10	08:44 16:00	07:54 17:04	06:46 18:05	06:24 20:10	05:12 21:11	04:27 22:01	04:39 22:00	05:32 21:06	06:34 19:48	07:34 18:28	07:40 16:16	08:35 15:38
11	08:43 16:02	07:52 17:06	06:43 18:08	06:21 20:12	05:10 21:13	04:27 22:02	04:40 21:59	05:34 21:04	06:36 19:46	07:36 18:26	07:42 16:14	08:37 15:38
12	08:42 16:04	07:50 17:09	06:40 18:10	06:18 20:14	05:08 21:15	04:26 22:02	04:41 21:58	05:36 21:02	06:38 19:43	07:38 18:23	07:44 16:12	08:38 15:38
13	08:41 16:06	07:47 17:11	06:38 18:12	06:16 20:16	05:06 21:17	04:26 22:03	04:43 21:57	05:38 20:59	06:40 19:40	07:40 18:21	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:04 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:42 19:38	07:42 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:33 18:16	06:11 20:20	05:02 21:21	04:25 22:05	04:46 21:54	05:42 20:55	06:44 19:35	07:44 18:16	07:51 16:07	08:41 15:37
16	08:38 16:11	07:41 17:18	06:30 18:18	06:08 20:22	05:00 21:23	04:25 22:05	04:47 21:53	05:44 20:52	06:46 19:32	07:46 18:13	07:53 16:05	08:42 15:37
17	08:36 16:13	07:38 17:20	06:27 18:20	06:06 20:24	04:58 21:25	04:25 22:06	04:49 21:51	05:46 20:50	06:48 19:30	07:48 18:11	07:55 16:03	08:43 15:37
18	08:35 16:15	07:36 17:22	06:25 18:22	06:03 20:26	04:56 21:27	04:25 22:06	04:50 21:50	05:48 20:47	06:50 19:27	07:51 18:08	07:57 16:01	08:44 15:37
19	08:34 16:17	07:34 17:24	06:22 18:24	06:01 20:28	04:54 21:29	04:25 22:07	04:52 21:48	05:50 20:45	06:52 19:24	07:53 18:06	07:59 16:00	08:45 15:38
20	08:32 16:19	07:31 17:26	06:19 18:26	05:58 20:31	04:53 21:30	04:25 22:07	04:53 21:47	05:52 20:43	06:54 19:22	07:55 18:03	08:01 15:58	08:45 15:38
21	08:31 16:21	07:29 17:29	06:17 18:28	05:55 20:33	04:51 21:32	04:25 22:07	04:55 21:45	05:54 20:40	06:56 19:19	07:57 18:01	08:03 15:57	08:46 15:38
22	08:30 16:23	07:26 17:31	06:14 18:31	05:53 20:35	04:49 21:34	04:25 22:07	04:57 21:44	05:56 20:38	06:58 19:16	07:59 17:58	08:05 15:55	08:46 15:39
23	08:28 16:25	07:24 17:33	06:11 18:33	05:51 20:37	04:48 21:36	04:25 22:08	04:58 21:42	05:58 20:35	07:00 19:13	08:01 17:56	08:07 15:54	08:47 15:39
24	08:26 16:27	07:21 17:35	06:09 18:35	05:48 20:39	04:46 21:38	04:25 22:08	05:00 21:40	06:00 20:33	07:02 19:11	08:03 17:53	08:09 15:52	08:47 15:40
25	08:25 16:29	07:19 17:37	06:06 18:37	05:46 20:41	04:44 21:39	04:26 22:08	05:02 21:39	06:02 20:30	07:04 19:08	07:05 16:51	08:11 15:51	08:48 15:41
26	08:23 16:31	07:16 17:40	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:04 21:37	06:04 20:28	07:06 19:05	07:08 16:49	08:13 15:50	08:48 15:41
27	08:22 16:33	07:14 17:42	06:01 18:41	05:41 20:45	04:42 21:42	04:27 22:08	05:05 21:35	06:06 20:25	07:08 19:03	07:10 16:46	08:15 15:49	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:10 19:00	07:12 16:44	08:16 15:47	08:48 15:43
29	08:18 16:38		06:55 19:45	05:36 20:49	04:39 21:46	04:28 22:07	05:09 21:31	06:10 20:20	07:12 18:57	07:14 16:42	08:18 15:46	08:48 15:44
30	08:16 16:40		06:53 19:47	05:34 20:51	04:38 21:47	04:29 22:07	05:11 21:29	06:12 20:17	07:14 18:55	07:16 16:39	08:20 15:45	08:48 15:45
31	08:14 16:42		06:50 19:49		04:36 21:49		05:13 21:28	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Rubeniš i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (429)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	January	February	March	April	May	June
1	08:48	08:13	07:09	06:47	05:31	04:35
	15:47	16:44	17:46	19:51	20:53	21:50
2	08:48	08:11	07:06	06:44	05:29	04:34
	15:48	16:46	17:48	19:53	20:55	21:51
3	08:48	08:09	07:04	17:20 (DD1)	06:42	05:27
	15:50	16:48	17:50	2	17:22 (DD1)	19:55
4	08:47	08:07	07:01	17:17 (DD1)	06:39	05:24
	15:51	16:51	17:52	7	17:24 (DD1)	19:57
5	08:47	08:05	06:59	17:14 (DD1)	06:36	05:22
	15:52	16:53	17:55	11	17:25 (DD1)	19:59
6	08:46	08:03	06:56	17:14 (DD1)	06:34	05:20
	15:54	16:55	17:57	14	17:28 (DD1)	20:01
7	08:46	08:00	06:53	17:12 (DD1)	06:31	05:18
	15:55	16:57	17:59	18	17:30 (DD1)	20:04
8	08:45	07:58	06:51	17:11 (DD1)	06:29	05:16
	15:57	16:59	18:01	20	17:31 (DD1)	20:06
9	08:44	07:56	16:28 (O5)	06:48	17:12 (DD1)	06:26
	15:58	17:02	1	16:29 (O5)	18:03	20
10	08:44	07:54	16:26 (O5)	06:46	17:11 (DD1)	06:23
	16:00	17:04	6	16:32 (O5)	18:05	20
11	08:43	07:52	16:24 (O5)	06:43	17:11 (DD1)	06:21
	16:02	17:06	10	16:34 (O5)	18:07	19
12	08:42	07:50	16:22 (DD3)	06:40	17:12 (DD1)	06:18
	16:03	17:08	15	16:37 (O5)	18:09	18
13	08:41	07:47	16:21 (DD3)	06:38	17:12 (DD1)	06:16
	16:05	17:11	18	16:39 (O5)	18:12	17
14	08:40	07:45	16:19 (DD3)	06:35	17:13 (DD1)	06:13
	16:07	17:13	22	16:41 (O5)	18:14	14
15	08:39	07:43	16:18 (DD3)	06:32	17:16 (DD1)	06:10
	16:09	17:15	24	16:42 (O5)	18:16	9
16	08:38	07:41	16:17 (DD3)	06:30	06:08	04:59
	16:11	17:17	24	16:41 (O5)	18:18	20:22
17	08:36	07:38	16:16 (DD3)	06:27	06:05	04:58
	16:13	17:20	26	16:42 (O5)	18:20	20:24
18	08:35	07:36	16:15 (DD3)	06:24	06:03	04:56
	16:15	17:22	26	16:41 (DD3)	18:22	20:26
19	08:34	07:33	16:16 (DD3)	06:22	17:51 (O3)	06:00
	16:16	17:24	26	16:42 (DD3)	18:24	5
20	08:32	07:31	16:15 (DD3)	06:19	17:49 (O3)	05:58
	16:18	17:26	27	16:42 (DD3)	18:26	9
21	08:31	07:29	16:16 (DD3)	06:16	17:47 (O3)	05:55
	16:20	17:28	26	16:42 (DD3)	18:28	13
22	08:30	07:26	16:15 (DD3)	06:14	17:47 (O3)	05:53
	16:23	17:31	26	16:41 (DD3)	18:30	16
23	08:28	07:24	16:16 (DD3)	06:11	17:46 (O3)	05:50
	16:25	17:33	25	16:41 (DD3)	18:32	18
24	08:26	07:21	16:16 (DD3)	06:08	17:45 (O3)	05:48
	16:27	17:35	24	16:40 (DD3)	18:35	19
25	08:25	07:19	16:17 (DD3)	06:06	17:45 (O3)	05:45
	16:29	17:37	22	16:39 (DD3)	18:37	19
26	08:23	07:16	16:18 (DD3)	06:03	17:45 (O3)	05:43
	16:31	17:39	20	16:38 (DD3)	18:39	18
27	08:22	07:14	16:19 (DD3)	06:00	17:45 (O3)	05:41
	16:33	17:42	17	16:36 (DD3)	18:41	17
28	08:20	07:11	16:22 (DD3)	05:58	17:46 (O3)	05:38
	16:35	17:44	12	16:34 (DD3)	18:43	15
29	08:18			06:55	18:47 (O3)	05:36
	16:37			19:45	18:59 (O3)	20:49
30	08:16			06:52	18:50 (O3)	05:34
	16:40			19:47	5	18:55 (O3)
31	08:14			06:50		20:51
	16:42			19:49		21:49
Potential sun hours	236	266	366		426	507
Total, worst case			355			528
Sun reduction		0,22	0,39			
Oper. time red.		1,00	1,00			
Wind dir. red.		1,00	1,00			
Total reduction		0,22	0,39			
Total, real		89	139			

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Rubeniš i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (429)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:29 22:06	05:14 21:26	06:16 20:12	07:15 18:52	17:51 (DD1) 18:09 (DD1)	07:20 16:35
2	04:30 22:06	05:16 21:24	06:18 20:09	07:17 18:49	17:50 (DD1) 18:09 (DD1)	5 16:01 (O5)
3	04:31 22:05	05:18 21:21	06:20 20:07	07:19 18:47	17:49 (DD1) 18:09 (DD1)	08:25 15:42
4	04:32 22:05	05:20 21:19	06:22 20:04	07:22 18:44	17:49 (DD1) 18:09 (DD1)	08:27 15:41
5	04:33 22:04	05:22 21:17	06:24 20:01	07:24 18:41	17:48 (DD1) 18:08 (DD1)	08:28 15:41
6	04:34 22:03	05:24 21:15	06:26 19:59	07:26 18:39	17:48 (DD1) 18:08 (DD1)	07:31 16:24
7	04:35 22:03	05:26 21:13	06:28 19:56	07:28 18:36	17:48 (DD1) 18:05 (DD1)	07:33 16:22
8	04:36 22:02	05:28 21:11	06:30 19:54	07:30 18:33	17:49 (DD1) 18:02 (DD1)	07:36 16:20
9	04:37 22:01	05:30 21:08	06:32 19:51	07:32 18:31	17:51 (DD1) 18:00 (DD1)	07:38 16:18
10	04:38 22:00	05:32 21:06	06:34 19:48	07:34 18:28	17:53 (DD1) 17:57 (DD1)	07:40 16:16
11	04:40 21:59	05:34 21:04	06:36 19:46	07:36 18:26	07:42 16:14	08:37 15:37
12	04:41 21:58	05:36 21:02	06:38 19:43	07:38 18:23	07:44 16:12	08:38 15:37
13	04:42 21:57	05:38 20:59	06:40 19:40	18:42 (O3) 18:46 (O3)	07:40 18:20	16:57 (DD3) 17:04 (DD3)
14	04:44 21:55	05:40 20:57	06:42 19:38	18:38 (O3) 18:49 (O3)	07:42 18:18	16:53 (DD3) 17:07 (DD3)
15	04:45 21:54	05:42 20:55	06:44 19:35	18:36 (O3) 18:50 (O3)	07:44 18:15	16:52 (DD3) 17:10 (DD3)
16	04:47 21:53	05:44 20:52	06:46 19:32	18:35 (O3) 18:51 (O3)	07:46 18:13	16:50 (DD3) 17:11 (DD3)
17	04:48 21:51	05:46 20:50	06:47 19:29	18:34 (O3) 18:52 (O3)	07:48 18:10	16:48 (DD3) 17:11 (DD3)
18	04:50 21:50	05:48 20:47	06:49 19:27	18:33 (O3) 18:52 (O3)	07:50 18:08	16:47 (DD3) 17:11 (DD3)
19	04:51 21:49	05:50 20:45	06:51 19:24	18:32 (O3) 18:51 (O3)	07:53 18:05	16:46 (DD3) 17:12 (DD3)
20	04:53 21:47	05:52 20:43	06:53 19:21	18:32 (O3) 18:51 (O3)	07:55 18:03	16:46 (DD3) 17:12 (DD3)
21	04:55 21:45	05:54 20:40	06:55 19:19	18:32 (O3) 18:49 (O3)	07:57 18:00	16:46 (DD3) 17:12 (DD3)
22	04:56 21:44	05:56 20:38	06:57 19:16	18:32 (O3) 18:46 (O3)	07:59 17:58	16:45 (DD3) 17:12 (DD3)
23	04:58 21:42	05:58 20:35	06:59 19:13	18:33 (O3) 18:43 (O3)	08:01 17:56	16:46 (DD3) 17:12 (DD3)
24	05:00 21:40	06:00 20:33	07:01 19:11	18:34 (O3) 18:41 (O3)	08:03 17:53	16:46 (DD3) 17:12 (DD3)
25	05:02 21:39	06:02 20:30	07:03 19:08	18:37 (O3) 18:38 (O3)	07:05 16:51	15:46 (DD3) 16:11 (DD3)
26	05:03 21:37	06:04 20:27	07:05 19:05	07:07 16:48	15:47 (DD3) 16:12 (O5)	08:13 15:49
27	05:05 21:35	06:06 20:25	07:07 19:03	07:10 16:46	15:48 (DD3) 16:11 (O5)	08:15 15:48
28	05:07 21:33	06:08 20:22	07:09 19:00	17:58 (DD1) 18:04 (DD1)	07:12 16:44	15:48 (DD3) 16:10 (O5)
29	05:09 21:31	06:10 20:20	07:11 18:57	17:55 (DD1) 18:07 (DD1)	07:14 16:41	15:50 (DD3) 16:08 (O5)
30	05:11 21:29	06:12 20:17	07:13 18:55	17:53 (DD1) 18:08 (DD1)	07:16 16:39	15:52 (DD3) 16:06 (O5)
31	05:13 21:28	06:14 20:15		07:18 16:37	15:54 (O5) 16:03 (O5)	08:48 15:46
Potential sun hours	528	469	384	324	248	217
Total, worst case			202	560	5	
Sun reduction			0,43	0,29	0,08	
Oper. time red.			1,00	1,00	1,00	
Wind dir. red.			1,00	1,00	1,00	
Total reduction			0,43	0,29	0,08	
Total, real			87	162	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	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Rudzdobes - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (560)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:07	21:26	20:12	18:51	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:24
	15:47	16:45	17:48	19:53	20:55	21:52	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:21	20:07	18:46	16:29	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:05	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:56	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:36	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:34	07:40	08:36
	15:59	17:03	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:50	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:04	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:56	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:51	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:55	19:34	18:15	16:06	15:36
16	08:38	07:40	06:29	06:07	04:59	04:23	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:17	20:22	21:23	22:06	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:46
	16:18	17:26	18:26	20:30	21:31	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:08	21:46	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:13	05:52	04:48	04:23	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:27	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:34	18:34	20:39	21:38	22:08	21:41	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:22	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:15	08:48
	16:32	17:41	18:40	20:45	21:43	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:12	08:17	08:49
	16:34	17:43	18:42	20:47	21:44	22:08	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:30	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:49
	16:41		19:49		21:49		21:28	20:14		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	385	324	248	216
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Salas pamatskola (kad. apz. 76740020242001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (479)  
Sunshine probability S (Average daily sunshine hours) []

### Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:46	08:12 16:43	07:08 17:45	06:47 19:51	05:30 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:51	07:20 16:34	08:22 15:43
2	08:48 15:47	08:10 16:45	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:17 21:21	06:19 20:06	07:19 18:46	07:25 16:29	08:25 15:41
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	07:21 18:43	07:27 16:27	08:27 15:40
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:23 21:15	06:25 19:58	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:56	07:58 16:59	06:50 18:00	06:28 20:05	05:15 21:07	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:57	07:56 17:01	06:48 18:03	06:25 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:50	07:31 18:30	07:38 16:17	08:34 15:37
10	08:43 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:31 21:06	06:33 19:48	07:33 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:11	05:09 21:13	04:25 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:35 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:06 21:15	04:25 22:03	04:40 21:58	05:35 21:01	06:37 19:42	07:38 18:22	07:44 16:11	08:38 15:36
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	05:04 21:17	04:24 22:03	04:41 21:57	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
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31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Salas pamatskola (kad. apz. 76740020242004) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (597)  
Sunshine probability S (Average daily sunshine hours) []

### Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:46	08:12 16:43	07:08 17:45	06:47 19:51	05:30 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:51	07:20 16:34	08:22 15:43
2	08:48 15:47	08:10 16:45	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:17 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:41
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	07:21 18:43	07:27 16:27	08:27 15:40
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:23 21:15	06:25 19:58	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:38
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25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:43 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 19:07	08:05 16:50	08:11 15:50	08:48 15:39
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31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Sauleskalni - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (443)  
Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:15 21:25	06:16 20:12	07:15 18:52	07:20 16:35	08:22 15:44
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29	08:18 16:38		06:55 19:45	05:36 20:49	04:39 21:45	04:28 22:07	05:09 21:31	06:10 20:20	07:11 18:57	08:14 16:42	08:18 15:46	08:48 15:44
30	08:16 16:40		06:53 19:47	05:34 20:51	04:38 21:47	04:29 22:07	05:11 21:29	06:12 20:17	07:13 18:55	08:16 16:39	08:20 15:45	08:48 15:45
31	08:14 16:42		06:50 19:49		04:36 21:48		05:13 21:27	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	527	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Saulrieti - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (413)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:13	07:09	06:47	05:31	04:35	04:29	05:14	06:16	07:15	07:20	08:22
	15:47	16:44	17:46	19:51	20:53	21:50	22:06	21:26	20:12	18:52	16:35	15:44
2	08:48	08:11	07:06	06:44	05:29	04:34	04:30	05:16	06:18	07:17	07:23	08:24
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:24	20:09	18:49	16:32	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:18	06:20	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:47	16:30	15:42
4	08:47	08:07	07:01	06:39	05:24	04:32	04:32	05:20	06:22	07:21	07:27	08:27
	15:51	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:41
5	08:47	08:05	06:59	06:36	05:22	04:31	04:33	05:22	06:24	07:24	07:29	08:28
	15:52	16:53	17:55	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:26	15:40
6	08:46	08:03	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:01	21:03	21:57	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:00	06:53	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:33	08:31
	15:55	16:57	17:59	20:04	21:05	21:58	22:03	21:13	19:56	18:36	16:22	15:39
8	08:45	07:58	06:51	06:29	05:15	04:28	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	16:59	18:01	20:06	21:07	21:59	22:02	21:11	19:54	18:33	16:20	15:39
9	08:44	07:56	06:48	06:26	05:13	04:27	04:37	05:30	06:32	07:32	07:38	08:34
	15:58	17:02	18:03	20:08	21:09	22:00	22:01	21:09	19:51	18:31	16:18	15:38
10	08:44	07:54	06:46	06:23	05:11	04:27	04:38	05:32	06:34	07:34	07:40	08:35
	16:00	17:04	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:09	04:26	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:46	18:26	16:14	15:37
12	08:42	07:50	06:40	06:18	05:07	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:02	19:43	18:23	16:12	15:37
13	08:41	07:47	06:38	06:16	05:05	04:25	04:42	05:38	06:40	07:40	07:46	08:39
	16:05	17:11	18:12	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:10	15:37
14	08:40	07:45	06:35	06:13	05:03	04:25	04:44	05:40	06:42	07:42	07:48	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:37	18:18	16:08	15:37
15	08:39	07:43	06:32	06:10	05:01	04:25	04:45	05:42	06:43	07:44	07:51	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:37
16	08:38	07:41	06:30	06:08	04:59	04:24	04:47	05:44	06:45	07:46	07:53	08:42
	16:11	17:17	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:04	15:37
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:46	06:47	07:48	07:55	08:43
	16:12	17:20	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:03	15:37
18	08:35	07:36	06:24	06:03	04:56	04:24	04:50	05:48	06:49	07:50	07:57	08:44
	16:14	17:22	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08	16:01	15:37
19	08:34	07:33	06:22	06:00	04:54	04:24	04:51	05:50	06:51	07:53	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:58	04:52	04:24	04:53	05:52	06:53	07:55	08:01	08:45
	16:18	17:26	18:26	20:30	21:31	22:07	21:47	20:43	19:21	18:03	15:58	15:37
21	08:31	07:29	06:16	05:55	04:50	04:24	04:55	05:54	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:33	21:32	22:07	21:45	20:40	19:19	18:00	15:56	15:38
22	08:30	07:26	06:14	05:53	04:49	04:24	04:56	05:56	06:57	07:59	08:05	08:47
	16:22	17:31	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:58	15:55	15:38
23	08:28	07:24	06:11	05:50	04:47	04:25	04:58	05:58	06:59	08:01	08:07	08:47
	16:24	17:33	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:39
24	08:27	07:21	06:08	05:48	04:46	04:25	05:00	06:00	07:01	08:03	08:09	08:48
	16:27	17:35	18:35	20:39	21:38	22:08	21:41	20:33	19:11	17:53	15:52	15:39
25	08:25	07:19	06:06	05:45	04:44	04:25	05:01	06:02	07:03	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:40
26	08:23	07:16	06:03	05:43	04:43	04:26	05:03	06:04	07:05	08:07	08:13	08:48
	16:31	17:39	18:39	20:43	21:41	22:08	21:37	20:27	19:05	17:48	15:49	15:41
27	08:22	07:14	06:00	05:41	04:41	04:26	05:05	06:06	07:07	08:09	08:15	08:48
	16:33	17:42	18:41	20:45	21:43	22:08	21:35	20:25	19:03	17:46	15:48	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:09	08:12	08:16	08:48
	16:35	17:44	18:43	20:47	21:44	22:07	21:33	20:22	19:00	17:44	15:47	15:42
29	08:18		06:55	05:36	04:38	04:27	05:09	06:10	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	17:41	15:46	15:43
30	08:16		06:52	05:33	04:37	04:28	05:11	06:12	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:30	20:17	18:55	17:39	15:45	15:44
31	08:14		06:50		04:36		05:12	06:14		07:18		08:48
	16:42		19:49		21:49		21:28	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Saulstari - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (494)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:42	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:26	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Senci - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (564)  
Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Siladruvas (kad. apz. 76740020177001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (565) Sunshine probability S (Average daily sunshine hours) []

### Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:07	21:26	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:15	06:17	07:17	07:22	08:24
	15:47	16:45	17:48	19:53	20:55	21:52	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:09	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:21	20:06	18:46	16:29	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:36
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:05	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:02	19:43	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:05	15:36
16	08:38	07:40	06:29	06:07	04:59	04:23	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:17	20:22	21:23	22:06	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:31	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:08	21:46	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:13	05:52	04:48	04:23	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:34	18:34	20:39	21:38	22:08	21:41	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:15	08:48
	16:32	17:41	18:40	20:45	21:43	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:49
	16:34	17:43	18:42	20:47	21:44	22:08	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:49
	16:41		19:49		21:49		21:28	20:14		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Siladruvas (kad. apz. 76740020212001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (512)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:46	08:12 16:43	07:08 17:45	06:47 19:51	19:01 (PrRR3) 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:51	07:20 16:34	08:22 15:43
2	08:48 15:47	08:10 16:45	07:06 17:48	06:44 19:53	19:01 (PrRR3) 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	19:01 (PrRR3) 20:57	04:32 21:53	04:30 22:05	05:17 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:41
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	19:02 (PrRR3) 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	07:21 18:43	07:27 16:27	08:27 15:40
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	19:03 (PrRR3) 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	19:06 (PrRR3) 21:03	04:29 21:57	04:33 22:03	05:23 21:15	06:25 19:59	19:02 (PrRR3) 18:38	07:25 16:23	08:30 15:39
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	19:10 (PrRR3) 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	18:58 (PrRR3) 18:36	07:27 16:21	08:31 15:38
8	08:45 15:56	07:58 16:59	06:50 18:00	06:28 20:05	05:15 21:07	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53	18:56 (PrRR3) 18:33	07:29 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:25 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51	18:55 (PrRR3) 18:30	07:31 16:17	08:34 15:37
10	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:31 21:06	06:33 19:48	18:54 (PrRR3) 18:28	07:33 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:11	05:09 21:13	04:25 22:02	04:39 21:59	05:33 21:04	06:35 19:45	18:53 (PrRR3) 18:25	07:35 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:06 21:15	04:25 22:03	04:40 21:58	05:35 21:01	06:37 19:42	18:53 (PrRR3) 18:23	07:38 16:11	08:44 15:36
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	05:04 21:17	04:24 22:03	04:41 21:57	05:37 20:59	06:39 19:40	18:53 (PrRR3) 18:20	07:40 16:09	08:46 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	05:03 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 19:37	18:53 (PrRR3) 18:17	07:42 16:07	08:48 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:44 21:54	05:41 20:54	06:43 19:34	18:53 (PrRR3) 18:15	07:44 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:17	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 19:32	18:54 (PrRR3) 18:12	07:46 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:23 22:06	04:47 21:51	05:45 20:50	06:47 19:29	18:55 (PrRR3) 18:10	07:48 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:23 22:06	04:49 21:50	05:47 20:47	06:49 19:26	18:59 (PrRR3) 18:07	07:50 16:00	08:44 15:36
19	08:34 16:16	07:33 17:23	06:21 18:24	06:00 20:28	04:53 21:29	04:23 22:07	04:51 21:48	05:49 20:45	06:51 19:24	18:59 (PrRR3) 18:05	07:52 15:59	08:45 15:36
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:51 21:30	04:23 22:07	04:52 21:47	05:51 20:42	06:53 19:21	18:59 (PrRR3) 18:02	07:54 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:23 22:07	04:54 21:45	05:53 20:40	06:55 19:18	18:59 (PrRR3) 18:00	07:56 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 19:16	18:59 (PrRR3) 17:57	07:59 15:54	08:47 15:38
23	08:28 16:24	07:23 17:32	06:11 18:32	05:50 20:36	04:46 21:36	04:24 22:08	04:57 21:42	05:57 20:35	06:59 19:13	18:59 (PrRR3) 17:55	08:01 15:53	08:47 15:38
24	08:26 16:26	07:21 17:34	06:08 18:34	05:47 20:39	04:45 21:37	04:24 22:08	04:59 21:40	05:59 20:32	07:01 19:10	18:59 (PrRR3) 17:53	08:09 15:51	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:43 21:37	04:25 22:08	05:01 21:39	06:01 20:30	07:03 19:07	18:59 (PrRR3) 16:50	08:11 15:50	08:48 15:39
26	08:23 16:30	07:16 17:39	06:03 18:38	18:08 (PrRR3) 05:42	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 19:05	18:59 (PrRR3) 16:48	08:13 15:49	08:48 15:40
27	08:21 16:32	07:14 17:41	06:00 18:40	18:05 (PrRR3) 05:40	04:40 21:42	04:25 22:08	05:04 21:35	06:05 20:25	07:07 19:02	18:59 (PrRR3) 16:45	08:14 15:47	08:48 15:41
28	08:20 16:34	07:11 17:43	05:57 18:42	18:03 (PrRR3) 05:38	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	07:09 18:59	18:59 (PrRR3) 16:43	08:16 15:46	08:48 15:42
29	08:18 16:37	07:08 17:45	06:55 18:45	19:03 (PrRR3) 05:35	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:19	07:11 18:57	18:59 (PrRR3) 16:41	08:18 15:45	08:48 15:43
30	08:16 16:39	07:06 17:47	06:52 18:47	19:01 (PrRR3) 05:33	04:36 21:47	04:27 22:07	05:10 21:29	06:11 20:17	07:13 18:54	18:59 (PrRR3) 16:38	08:20 15:44	08:48 15:44
31	08:14 16:41	07:04 17:49	06:49 18:49	19:01 (PrRR3) 05:31	04:35 21:49	04:27 22:07	05:12 21:27	06:13 20:14	07:13 18:54	18:59 (PrRR3) 16:36	08:20 15:44	08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case			70	80					152			
Sun reduction			0,39	0,44					0,43			
Oper. time red.			1,00	1,00					1,00			
Wind dir. red.			1,00	1,00					1,00			
Total reduction			0,39	0,44					0,43			
Total, real			27	35					66			

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Silares - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (523)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:05	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		05:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Flickering\_Vestas\_V162\_Prikuli\_A

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
15.07.2025 14:55/4.1.254

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Skalbes - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (419)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	January	February	March	April	May	June
1	08:48	08:13	15:20 (DD3)	07:09	16:58 (O3)	06:47
	15:47	16:44	12 15:32 (DD3)	17:46	18 17:16 (O3)	19:51
2	08:48	08:11	15:23 (DD3)	07:06	16:57 (O3)	06:44
	15:48	16:46	7 15:30 (DD3)	17:48	19 17:16 (O3)	19:53
3	08:48	08:09	07:04	16:58 (O3)	06:42	05:27
	15:50	16:48	17:50	18 17:16 (O3)	19:55	20:57
4	08:47	08:07	07:01	16:58 (O3)	06:39	05:24
	15:51	16:51	17:52	17 17:15 (O3)	19:57	20:59
5	08:47	08:05	06:59	16:58 (O3)	06:36	05:22
	15:52	16:53	17:55	16 17:14 (O3)	19:59	21:01
6	08:46	08:03	06:56	16:59 (O3)	06:34	05:20
	15:54	16:55	17:57	14 17:13 (O3)	20:01	21:03
7	08:46	08:01	06:53	17:01 (O3)	06:31	05:18
	15:55	16:57	17:59	10 17:11 (O3)	20:04	21:05
8	08:45	07:58	06:51	17:05 (O3)	06:29	05:16
	15:57	16:59	18:01	1 17:06 (O3)	20:06	21:07
9	08:44	07:56	16:25 (DD1)	06:48	06:26	05:13
	15:58	17:02	4 16:29 (DD1)	18:03	20:08	21:10
10	08:44	07:54	16:24 (DD1)	06:46	06:23	05:11
	16:00	3 15:19 (DD3)	17:04	8 16:32 (DD1)	18:05	20:10
11	08:43	07:52	16:22 (DD1)	06:43	17:35 (O2)	06:21
	16:02	6 15:21 (DD3)	17:06	12 16:34 (DD1)	18:07	4 17:39 (O2)
12	08:42	07:50	16:22 (DD1)	06:40	17:33 (O2)	06:18
	16:03	9 15:23 (DD3)	17:08	15 16:37 (DD1)	18:09	9 17:42 (O2)
13	08:41	07:47	16:22 (DD1)	06:38	17:32 (O2)	06:16
	16:05	12 15:26 (DD3)	17:11	17 16:39 (DD1)	18:12	11 17:43 (O2)
14	08:40	07:45	16:21 (DD1)	06:35	17:30 (O2)	06:13
	16:07	14 15:27 (DD3)	17:13	19 16:40 (DD1)	18:14	15 17:45 (O2)
15	08:39	07:43	16:21 (DD1)	06:32	17:30 (O2)	06:10
	16:09	16 15:29 (DD3)	17:15	19 16:40 (DD1)	18:16	18 17:48 (O2)
16	08:38	07:41	16:21 (DD1)	06:30	17:30 (O2)	06:08
	16:11	19 15:31 (DD3)	17:17	19 16:40 (DD1)	18:18	18 17:48 (O2)
17	08:36	07:38	16:22 (DD1)	06:27	17:29 (O2)	06:05
	16:13	20 15:32 (DD3)	17:20	18 16:40 (DD1)	18:20	18 17:47 (O2)
18	08:35	07:36	16:22 (DD1)	06:24	17:30 (O2)	06:03
	16:14	21 15:33 (DD3)	17:22	16 16:38 (DD1)	18:22	17 17:47 (O2)
19	08:34	07:33	16:23 (DD1)	06:22	17:30 (O2)	06:00
	16:16	22 15:34 (DD3)	17:24	15 16:38 (DD1)	18:24	16 17:46 (O2)
20	08:32	07:31	16:24 (DD1)	06:19	17:31 (O2)	05:58
	16:18	22 15:34 (DD3)	17:26	12 16:36 (DD1)	18:26	13 17:44 (O2)
21	08:31	07:29	16:28 (DD1)	06:16	17:33 (O2)	05:55
	16:20	22 15:34 (DD3)	17:28	5 16:33 (DD1)	18:28	8 17:41 (O2)
22	08:30	07:26	06:14	05:53	20:33	21:32
	16:22	23 15:36 (DD3)	17:31	18:30	20:35	21:34
23	08:28	07:24	06:11	05:50	20:37	21:36
	16:25	23 15:36 (DD3)	17:33	18:32	20:37	21:36
24	08:27	07:21	06:08	05:48	20:39	21:38
	16:27	23 15:36 (DD3)	17:35	18:35	20:39	21:38
25	08:25	07:19	17:02 (O3)	06:06	05:45	20:41
	16:29	23 15:36 (DD3)	17:37	5 17:07 (O3)	18:37	20:41
26	08:23	07:16	17:00 (O3)	06:03	05:43	20:43
	16:31	23 15:36 (DD3)	17:39	10 17:10 (O3)	18:39	20:43
27	08:22	07:14	16:59 (O3)	06:00	05:41	20:41
	16:33	22 15:36 (DD3)	17:42	13 17:12 (O3)	18:41	20:45
28	08:20	07:11	16:59 (O3)	05:58	05:38	20:40
	16:35	20 15:35 (DD3)	17:44	16 17:15 (O3)	18:43	20:47
29	08:18	06:55	06:55	05:36	20:49	21:46
	16:37	19 15:35 (DD3)	19:45	20:49	21:46	22:07
30	08:16	06:52	06:52	05:33	20:51	21:47
	16:40	17 15:34 (DD3)	19:47	20:51	21:47	22:07
31	08:14	06:50	06:50	04:36		
	16:42	16 15:34 (DD3)	19:49	21:49		
Potential sun hours	236	266	366	426	507	528
Total, worst case	395	242	260			
Sun reduction	0,13	0,22	0,39			
Oper. time red.	1,00	1,00	1,00			
Wind dir. red.	1,00	1,00	1,00			
Total reduction	0,13	0,22	0,39			
Total, real	53	54	102			

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

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

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Skalbes - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (419)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December			
1	04:29 22:06	05:14 21:26	06:16 20:12	07:15 18:52	18:12 (O2) 18:22 (O2)	07:20 16:35	15:53 (DD1) 16:01 (DD1)	08:22 15:44	14:57 (DD3) 15:03 (DD3)
2	04:30 22:06	05:16 21:24	06:18 20:09	07:17 18:49	18:13 (O2) 18:19 (O2)	07:23 16:32	15:55 (DD1) 15:58 (DD1)	08:23 15:43	14:59 (DD3) 15:02 (DD3)
3	04:31 22:05	05:18 21:21	06:20 20:07	07:20 18:47	18:15 (O2) 18:16 (O2)	07:25 16:30		08:25 15:42	
4	04:32 22:05	05:20 21:19	06:22 20:04	07:22 18:44		07:27 16:28		08:27 15:41	
5	04:33 22:04	05:22 21:17	06:24 20:02	07:24 18:41		07:29 16:26		08:28 15:41	
6	04:34 22:03	05:24 21:15	06:26 19:59	07:26 18:39	17:38 (O3) 17:46 (O3)	07:31 16:24		08:30 15:40	
7	04:35 22:03	05:26 21:13	06:28 19:56	07:28 18:36	17:35 (O3) 17:48 (O3)	07:33 16:22		08:31 15:39	
8	04:36 22:02	05:28 21:11	06:30 19:54	07:30 18:33	17:34 (O3) 17:49 (O3)	07:36 16:20		08:33 15:39	
9	04:37 22:01	05:30 21:09	06:32 19:51	07:32 18:31	17:33 (O3) 17:50 (O3)	07:38 16:18	14:53 (DD3) 15:01 (DD3)	08:34 15:38	
10	04:38 22:00	05:32 21:06	06:34 19:48	07:34 18:28	17:32 (O3) 17:50 (O3)	07:40 16:16	14:51 (DD3) 15:03 (DD3)	08:35 15:38	
11	04:40 21:59	05:34 21:04	06:36 19:46	07:36 18:26	17:32 (O3) 17:50 (O3)	07:42 16:14	14:50 (DD3) 15:05 (DD3)	08:37 15:37	
12	04:41 21:58	05:36 21:02	06:38 19:43	07:38 18:23	17:31 (O3) 17:50 (O3)	07:44 16:12	14:48 (DD3) 15:06 (DD3)	08:38 15:37	
13	04:42 21:57	05:38 20:59	06:40 19:40	07:40 18:20	17:31 (O3) 17:49 (O3)	07:46 16:10	14:47 (DD3) 15:07 (DD3)	08:39 15:37	
14	04:44 21:55	05:40 20:57	06:42 19:38	07:42 18:18	17:31 (O3) 17:46 (O3)	07:48 16:08	14:48 (DD3) 15:08 (DD3)	08:40 15:37	
15	04:45 21:54	05:42 20:55	06:44 19:35	07:44 18:15	17:32 (O3) 17:44 (O3)	07:51 16:06	14:47 (DD3) 15:09 (DD3)	08:41 15:37	
16	04:47 21:53	05:44 20:52	06:46 19:32	07:46 18:13	17:33 (O3) 17:41 (O3)	07:53 16:05	14:46 (DD3) 15:09 (DD3)	08:42 15:37	
17	04:48 21:51	05:46 20:50	06:47 19:29	07:48 18:10	17:35 (O3) 17:38 (O3)	07:55 16:03	14:47 (DD3) 15:10 (DD3)	08:43 15:37	
18	04:50 21:50	05:48 20:47	06:49 19:27	07:50 18:08		07:57 16:01	14:47 (DD3) 15:10 (DD3)	08:44 15:37	
19	04:51 21:49	05:50 20:45	06:51 19:24	07:53 18:05		07:59 16:00	14:47 (DD3) 15:10 (DD3)	08:45 15:37	
20	04:53 21:47	05:52 20:43	06:53 19:21	07:55 18:03		08:01 15:58	14:48 (DD3) 15:11 (DD3)	08:45 15:38	
21	04:55 21:45	05:54 20:40	06:55 19:19	07:57 18:00	16:57 (DD1) 17:05 (DD1)	08:03 15:56	14:48 (DD3) 15:10 (DD3)	08:46 15:38	
22	04:56 21:44	05:56 20:38	06:57 19:16	07:59 18:20 (O2) 18:26 (O2)	16:54 (DD1) 17:07 (DD1)	08:05 15:55	14:48 (DD3) 15:10 (DD3)	08:47 15:38	
23	04:58 21:42	05:58 20:35	06:59 19:13	08:01 18:16 (O2) 18:28 (O2)	16:53 (DD1) 17:08 (DD1)	08:07 15:53	14:48 (DD3) 15:10 (DD3)	08:47 15:39	
24	05:00 21:41	06:00 20:33	07:01 19:11	08:03 18:14 (O2) 18:29 (O2)	16:52 (DD1) 17:09 (DD1)	08:09 15:52	14:50 (DD3) 15:11 (DD3)	08:47 15:40	
25	05:02 21:39	06:02 20:30	07:03 19:08	07:05 18:13 (O2) 18:30 (O2)	15:51 (DD1) 16:09 (DD1)	08:11 15:51	14:50 (DD3) 15:10 (DD3)	08:48 15:40	
26	05:03 21:37	06:04 20:27	07:05 19:05	07:07 18:12 (O2) 18:30 (O2)	15:51 (DD1) 16:10 (DD1)	08:13 15:49	14:51 (DD3) 15:10 (DD3)	08:48 15:41	
27	05:05 21:35	06:06 20:25	07:07 19:03	07:10 18:12 (O2) 18:30 (O2)	15:51 (DD1) 16:10 (DD1)	08:15 15:48	14:52 (DD3) 15:09 (DD3)	08:48 15:42	
28	05:07 21:33	06:08 20:22	07:09 19:00	07:12 18:11 (O2) 18:29 (O2)	15:50 (DD1) 16:09 (DD1)	08:16 15:47	14:53 (DD3) 15:07 (DD3)	08:48 15:43	
29	05:09 21:31	06:10 20:20	07:11 18:57	07:14 18:11 (O2) 18:27 (O2)	15:51 (DD1) 16:08 (DD1)	08:18 15:46	14:54 (DD3) 15:06 (DD3)	08:49 15:44	
30	05:11 21:30	06:12 20:17	07:13 18:55	07:16 18:11 (O2) 18:24 (O2)	15:51 (DD1) 16:06 (DD1)	08:20 15:45	14:55 (DD3) 15:04 (DD3)	08:49 15:45	
31	05:13 21:28	06:14 20:15		07:18 16:37	15:52 (DD1) 16:03 (DD1)			08:48 15:46	
Potential sun hours	528	469	384	324	248	217			
Total, worst case			133	352	419	9			
Sun reduction			0,43	0,29	0,08	0,08			
Oper. time red.			1,00	1,00	1,00	1,00			
Wind dir. red.			1,00	1,00	1,00	1,00			
Total reduction			0,43	0,29	0,08	0,08			
Total, real			57	102	31	1			

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Slokas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (480)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:41
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:55	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:57	04:52	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:26	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:35	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:28	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Smelteri - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (484)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:41
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:42	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:26	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Smelteru biblioteka - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (545)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Smelteru kapseta - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (524)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:46	08:12 16:43	07:08 17:45	06:47 19:51	05:31 20:53	20:02 (PrRR3) 20:21 (PrRR3)	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:51	07:20 16:34
2	08:48 15:48	08:10 16:45	07:06 17:48	06:44 19:53	05:28 20:55	20:02 (PrRR3) 20:22 (PrRR3)	04:33 21:51	04:29 22:06	05:16 21:23	20:19 (PrRR3) 20:24 (PrRR3)	06:17 18:49	07:22 16:32
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	20:02 (PrRR3) 20:22 (PrRR3)	04:32 21:53	04:30 22:05	05:18 21:21	20:17 (PrRR3) 20:27 (PrRR3)	06:19 18:46	07:25 16:30
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	20:02 (PrRR3) 20:21 (PrRR3)	04:31 21:54	04:31 22:05	05:19 21:19	20:15 (PrRR3) 20:28 (PrRR3)	06:21 18:43	07:27 16:27
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	05:21 21:01	20:03 (PrRR3) 20:21 (PrRR3)	04:30 21:55	04:32 22:04	05:21 21:17	20:13 (PrRR3) 20:29 (PrRR3)	06:23 18:41	07:29 16:25
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	20:03 (PrRR3) 20:21 (PrRR3)	04:29 21:56	04:33 22:03	05:23 21:15	20:13 (PrRR3) 20:29 (PrRR3)	06:25 18:38	07:31 16:23
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	20:04 (PrRR3) 20:20 (PrRR3)	04:28 21:58	04:34 22:03	05:25 21:13	20:12 (PrRR3) 20:30 (PrRR3)	06:27 18:36	07:27 16:21
8	08:45 15:56	07:58 16:59	06:50 18:00	06:28 20:05	05:15 21:07	20:04 (PrRR3) 20:19 (PrRR3)	04:27 21:59	04:35 22:02	05:27 21:11	20:12 (PrRR3) 20:31 (PrRR3)	06:29 18:33	07:29 16:19
9	08:44 15:58	07:56 17:01	06:48 18:03	06:25 20:07	05:13 21:09	20:05 (PrRR3) 20:18 (PrRR3)	04:27 22:00	04:36 22:01	05:29 21:08	20:12 (PrRR3) 20:31 (PrRR3)	06:31 18:30	07:31 16:17
10	08:43 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	20:07 (PrRR3) 20:16 (PrRR3)	04:26 22:01	04:38 22:00	05:31 21:06	20:12 (PrRR3) 20:31 (PrRR3)	06:33 18:28	07:40 16:15
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:11	05:09 21:13	20:08 (PrRR3) 20:21 (PrRR3)	04:25 21:59	04:39 22:02	05:33 21:04	20:11 (PrRR3) 20:30 (PrRR3)	06:35 18:25	07:42 16:13
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	20:09 (PrRR3) 20:22 (PrRR3)	04:25 21:58	04:40 22:02	05:35 21:01	20:11 (PrRR3) 20:29 (PrRR3)	06:37 18:23	07:44 16:11
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	20:10 (PrRR3) 20:23 (PrRR3)	04:25 21:57	04:42 22:03	05:37 20:59	20:11 (PrRR3) 20:27 (PrRR3)	06:39 18:20	07:46 16:09
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	05:03 21:19	20:11 (PrRR3) 20:24 (PrRR3)	04:24 21:55	04:43 22:04	05:39 20:57	20:12 (PrRR3) 20:25 (PrRR3)	06:41 18:17	07:48 16:07
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	20:12 (PrRR3) 20:25 (PrRR3)	04:44 21:54	04:44 22:05	05:41 20:54	20:13 (PrRR3) 20:22 (PrRR3)	06:43 18:15	07:50 16:06
16	08:37 16:10	07:40 17:17	06:29 18:17	06:07 20:22	04:59 21:23	20:13 (PrRR3) 20:26 (PrRR3)	04:46 21:53	04:46 22:05	05:43 20:52	20:14 (PrRR3) 20:20 (PrRR3)	06:45 18:12	07:52 16:04
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	20:14 (PrRR3) 20:27 (PrRR3)	04:47 21:51	04:47 22:06	05:45 20:50	20:15 (PrRR3) 20:17 (PrRR3)	06:47 18:10	07:55 16:02
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	20:15 (PrRR3) 20:28 (PrRR3)	04:49 21:50	04:49 22:07	05:47 20:47	20:16 (PrRR3) 20:29 (PrRR3)	06:49 18:07	07:57 16:00
19	08:34 16:16	07:33 17:23	06:21 18:24	06:00 20:28	04:53 21:29	20:16 (PrRR3) 20:29 (PrRR3)	04:51 21:48	04:51 22:07	05:49 20:45	20:17 (PrRR3) 20:30 (PrRR3)	06:51 18:05	07:59 15:59
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:51 21:30	20:17 (PrRR3) 20:30 (PrRR3)	04:52 21:47	04:52 22:07	05:51 20:42	20:18 (PrRR3) 20:31 (PrRR3)	06:53 18:02	08:01 15:57
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	20:18 (PrRR3) 20:31 (PrRR3)	04:54 21:45	04:54 22:07	05:53 20:40	20:19 (PrRR3) 20:32 (PrRR3)	06:55 18:00	08:03 15:56
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	20:19 (PrRR3) 20:32 (PrRR3)	04:56 21:44	04:56 22:08	05:55 20:37	20:20 (PrRR3) 20:33 (PrRR3)	06:57 17:57	08:05 15:54
23	08:28 16:24	07:23 17:32	06:11 18:32	05:50 20:36	04:46 21:36	20:20 (PrRR3) 20:33 (PrRR3)	04:57 21:42	04:57 22:08	05:57 20:35	20:21 (PrRR3) 20:34 (PrRR3)	06:59 17:55	08:07 15:53
24	08:26 16:26	07:21 17:34	06:08 18:34	05:47 20:39	04:45 21:37	20:21 (PrRR3) 20:34 (PrRR3)	04:59 21:40	04:59 22:08	05:59 20:32	20:22 (PrRR3) 20:35 (PrRR3)	07:01 17:53	08:09 15:51
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:43 21:39	20:22 (PrRR3) 20:35 (PrRR3)	05:01 21:39	05:01 22:08	06:01 20:30	20:23 (PrRR3) 20:36 (PrRR3)	07:03 16:50	08:11 15:50
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	20:08 (PrRR3) 20:11 (PrRR3)	20:23 (PrRR3) 20:36 (PrRR3)	05:03 21:37	05:03 22:08	06:03 20:27	20:24 (PrRR3) 20:37 (PrRR3)	07:05 16:48	08:13 15:49
27	08:21 16:32	07:14 17:41	06:00 18:40	05:40 20:45	20:06 (PrRR3) 20:13 (PrRR3)	20:24 (PrRR3) 20:37 (PrRR3)	05:04 21:35	05:04 22:08	06:05 20:25	20:25 (PrRR3) 20:38 (PrRR3)	07:07 16:45	08:14 15:47
28	08:20 16:34	07:11 17:43	05:57 18:42	05:38 20:47	20:05 (PrRR3) 20:15 (PrRR3)	20:25 (PrRR3) 20:38 (PrRR3)	05:06 21:33	05:06 22:07	06:07 20:22	20:26 (PrRR3) 20:39 (PrRR3)	07:09 16:43	08:16 15:46
29	08:18 16:37	07:08 17:45	05:55 18:45	05:35 20:49	20:04 (PrRR3) 20:18 (PrRR3)	20:26 (PrRR3) 20:39 (PrRR3)	04:58 21:31	04:58 22:07	06:09 20:19	20:27 (PrRR3) 20:40 (PrRR3)	07:11 16:41	08:18 15:45
30	08:16 16:39	07:06 17:47	05:52 18:47	05:33 20:51	20:03 (PrRR3) 20:19 (PrRR3)	20:27 (PrRR3) 20:40 (PrRR3)	04:59 21:29	04:59 22:07	06:11 20:17	20:28 (PrRR3) 20:41 (PrRR3)	07:13 16:38	08:20 15:44
31	08:14 16:41	07:04 17:49	05:49 18:49	05:30 20:50	20:02 (PrRR3) 20:18 (PrRR3)	20:28 (PrRR3) 20:41 (PrRR3)	04:57 21:27	04:57 22:07	06:13 20:14	20:29 (PrRR3) 20:42 (PrRR3)	07:18 16:36	08:48 15:45
Potential sun hours	236	266	366	426	507		528	529	469	384	324	248
Total, worst case				50	167				218			
Sun reduction				0,44	0,56				0,52			
Oper. time red.				1,00	1,00				1,00			
Wind dir. red.				1,00	1,00				1,00			
Total reduction				0,44	0,56				0,52			
Total, real				22	94				114			

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Smedes - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (442)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:47	08:12 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:15 21:26	06:16 20:12	07:16 18:52	07:20 16:35	08:22 15:44
2	08:48 15:49	08:11 16:46	07:06 17:48	06:45 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:17 21:23	06:18 20:09	07:23 18:49	07:23 16:33	08:23 15:43
3	08:48 15:50	08:09 16:49	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:19 21:21	06:20 20:07	07:20 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:51	07:01 17:53	06:39 19:57	05:25 20:59	04:32 21:54	04:32 22:05	05:21 21:19	06:22 20:04	07:22 18:44	07:27 16:28	08:27 15:42
5	08:47 15:53	08:05 16:53	06:59 17:55	06:37 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:02	07:24 18:41	07:29 16:26	08:28 15:41
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:02	05:20 21:03	04:30 21:56	04:34 22:03	05:24 21:15	06:26 19:59	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:56	08:00 16:58	06:54 17:59	06:31 20:04	05:18 21:05	04:29 21:58	04:35 22:02	05:26 21:13	06:28 19:56	07:28 18:36	07:33 16:22	08:31 15:40
8	08:45 15:57	07:58 17:00	06:51 18:01	06:29 20:06	05:16 21:07	04:29 21:59	04:36 22:02	05:28 21:11	06:30 19:54	07:30 18:34	07:36 16:20	08:33 15:39
9	08:44 15:59	07:56 17:02	06:48 18:03	06:26 20:08	05:14 21:09	04:28 22:00	04:38 22:01	05:30 21:08	06:32 19:51	07:32 18:31	07:38 16:18	08:34 15:39
10	08:44 16:00	07:54 17:04	06:46 18:05	06:24 20:10	05:12 21:11	04:27 22:01	04:39 22:00	05:32 21:06	06:34 19:48	07:34 18:28	07:40 16:16	08:35 15:38
11	08:43 16:02	07:52 17:06	06:43 18:08	06:21 20:12	05:10 21:13	04:27 22:02	04:40 21:59	05:34 21:04	06:36 19:46	07:36 18:26	07:42 16:14	08:37 15:38
12	08:42 16:04	07:50 17:09	06:40 18:10	06:18 20:14	05:08 21:15	04:26 22:02	04:41 21:58	05:36 21:02	06:38 19:43	07:38 18:23	07:44 16:12	08:38 15:38
13	08:41 16:06	07:47 17:11	06:38 18:12	06:16 20:16	05:06 21:17	04:26 22:03	04:43 21:56	05:38 20:59	06:40 19:40	07:40 18:21	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:04 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:42 19:38	07:42 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:33 18:16	06:11 20:20	05:02 21:21	04:25 22:05	04:46 21:54	05:42 20:55	06:44 19:35	07:44 18:16	07:51 16:07	08:41 15:37
16	08:38 16:11	07:41 17:18	06:30 18:18	06:08 20:22	05:00 21:23	04:25 22:05	04:47 21:53	05:44 20:52	06:46 19:32	07:46 18:13	07:53 16:05	08:42 15:37
17	08:36 16:13	07:38 17:20	06:27 18:20	06:06 20:24	04:58 21:25	04:25 22:06	04:49 21:51	05:46 20:50	06:48 19:30	07:48 18:11	07:55 16:03	08:43 15:37
18	08:35 16:15	07:36 17:22	06:25 18:22	06:03 20:26	04:56 21:27	04:25 22:06	04:50 21:50	05:48 20:47	06:50 19:27	07:51 18:08	07:57 16:01	08:44 15:37
19	08:34 16:17	07:34 17:24	06:22 18:24	06:01 20:28	04:54 21:29	04:25 22:07	04:52 21:48	05:50 20:45	06:52 19:24	07:53 18:06	07:59 16:00	08:45 15:38
20	08:32 16:19	07:31 17:26	06:19 18:26	05:58 20:31	04:53 21:30	04:25 22:07	04:53 21:47	05:52 20:43	06:54 19:22	07:55 18:03	08:01 15:58	08:45 15:38
21	08:31 16:21	07:29 17:29	06:17 18:28	05:55 20:33	04:51 21:32	04:25 22:07	04:55 21:45	05:54 20:40	06:56 19:19	07:57 18:01	08:03 15:57	08:46 15:38
22	08:30 16:23	07:26 17:31	06:14 18:31	05:53 20:35	04:49 21:34	04:25 22:07	04:57 21:44	05:56 20:38	06:58 19:16	07:59 17:58	08:05 15:55	08:46 15:39
23	08:28 16:25	07:24 17:33	06:11 18:33	05:51 20:37	04:48 21:36	04:25 22:08	04:58 21:42	05:58 20:35	07:00 19:13	08:01 17:56	08:07 15:54	08:47 15:39
24	08:26 16:27	07:21 17:35	06:09 18:35	05:48 20:39	04:46 21:37	04:26 22:08	05:00 21:40	06:00 20:33	07:02 19:11	08:03 17:53	08:09 15:52	08:47 15:40
25	08:25 16:29	07:19 17:37	06:06 18:37	05:46 20:41	04:44 21:39	04:26 22:08	05:02 21:39	06:02 20:30	07:04 19:08	07:05 16:51	08:11 15:51	08:48 15:41
26	08:23 16:31	07:16 17:40	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:04 21:37	06:04 20:28	07:06 19:05	07:08 16:49	08:13 15:50	08:48 15:41
27	08:22 16:33	07:14 17:42	06:01 18:41	05:41 20:45	04:42 21:42	04:27 22:07	05:06 21:35	06:06 20:25	07:08 19:03	07:10 16:46	08:15 15:49	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:10 19:00	07:12 16:44	08:16 15:47	08:48 15:43
29	08:18 16:38		06:55 19:45	05:36 20:49	04:39 21:46	04:28 22:07	05:09 21:31	06:10 20:20	07:12 18:57	07:14 16:42	08:18 15:46	08:48 15:44
30	08:16 16:40		06:53 19:47	05:34 20:51	04:38 21:47	04:29 22:07	05:11 21:29	06:12 20:17	07:14 18:55	07:16 16:39	08:20 15:45	08:48 15:45
31	08:14 16:42		06:50 19:49		04:36 21:49		05:13 21:27	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	527	528	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Sniedzini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (569)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:27	15:41
5	08:47	08:04	06:58	06:36	05:22	04:30	04:32	05:22	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:55	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:39
8	08:45	07:58	06:50	06:28	05:15	04:28	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:38
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:05	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:24	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:57	04:52	04:24	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:40
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:41	04:26	05:05	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:35	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:37	04:28	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Sporanu majas - Shadow Receptor:  $1,0 \times 1,0$  Azimuth:  $3,1^\circ$  Slope:  $90,0^\circ$  (538)  
Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January	February	March	April	May	June
1	08:48 15:46 16:43	08:12 08:10 16:46	07:09 17:45 17:13 (AP6.1)	06:47 19:05 (Pr3a) 19:51	05:31 20:53 20:53	04:34 19:39 (Pr25) 21:50
2	08:48 15:48 16:46	08:10 08:09 16:46	07:06 17:48 17:11 (AP6.1)	06:44 19:05 (Pr3a) 19:53	05:28 20:55 20:55	04:33 19:39 (Pr25) 21:51
3	08:48 15:49 16:48	08:09 08:07 16:48	07:03 17:50 17:10 (AP6.1)	06:41 19:04 (Pr3a) 19:55	05:26 20:57 20:57	04:32 19:40 (Pr25) 21:53
4	08:47 15:50 16:50	08:07 08:04 16:50	07:01 17:52 17:23 (AP6.1)	06:39 19:03 (Pr3a) 19:57	05:24 20:59 20:59	04:31 19:40 (Pr25) 21:54
5	08:47 15:52 16:52	08:04 08:02 16:52	06:58 17:54 17:25 (AP6.1)	06:36 19:02 (Pr3a) 19:59	05:21 21:01 21:01	04:30 19:41 (Pr25) 21:55
6	08:46 15:53 16:54	08:02 08:00 16:54	06:56 17:56 17:28 (AP6.1)	06:33 19:02 (Pr3a) 20:01	05:19 21:03 21:03	04:29 19:42 (Pr25) 21:57
7	08:46 15:54 16:57	08:00 07:58 16:57	06:53 17:58 17:27 (AP6.1)	06:31 19:00 (Pr3a) 20:03	05:17 21:05 21:05	04:28 19:42 (Pr25) 21:58
8	08:45 15:56 16:59	07:58 07:56 16:59	06:51 18:01 17:26 (AP6.1)	06:28 19:03 (Pr3a) 20:05	05:15 21:07 21:07	04:27 19:44 (Pr25) 21:59
9	08:44 15:58 17:01	07:56 07:54 17:01	06:48 18:03 17:25 (AP6.1)	06:25 19:04 (Pr3a) 20:07	05:13 21:09 21:09	04:27 19:45 (Pr25) 22:00
10	08:44 15:59 17:03	07:54 07:52 17:03	06:45 18:05 17:25 (AP6.1)	06:23 19:05 (Pr3a) 20:09	05:11 21:11 21:11	04:26 19:47 (Pr25) 22:01
11	08:43 16:01 17:06	07:52 07:06 17:06	06:43 18:07 17:23 (AP6.1)	06:20 19:06 (Pr3a) 20:12	05:09 21:13 21:13	04:26 20:00 (PrRR3) 22:02
12	08:42 16:03 17:08	07:49 07:08 17:08	06:40 18:09 17:20 (AP6.1)	06:18 19:07 (Pr3a) 20:14	05:07 21:15 21:15	04:25 19:57 (PrRR3) 22:03
13	08:41 16:04 17:10	07:47 07:10 17:10	06:37 18:11 17:10 (AP6.1)	06:15 19:08 (Pr3a) 20:16	05:05 21:17 21:17	04:25 19:56 (PrRR3) 22:03
14	08:40 16:06 17:12	07:45 07:12 17:12	06:35 18:13 17:12 (AP6.1)	06:12 19:09 (Pr3a) 20:18	05:03 21:19 21:19	04:24 19:55 (PrRR3) 22:04
15	08:39 16:08 17:15	07:43 07:15 17:15	06:32 18:15 16:38 (AP2)	06:10 19:10 (Pr3a) 20:20	05:01 21:21 21:21	04:24 19:53 (PrRR3) 22:05
16	08:38 16:10 17:17	07:40 07:17 17:17	06:29 18:18 16:35 (AP2)	06:07 19:11 (Pr3a) 20:22	04:59 21:23 21:23	04:24 19:52 (PrRR3) 22:05
17	08:36 16:12 17:19	07:38 07:19 17:19	06:27 18:20 16:35 (AP2)	06:05 19:12 (Pr3a) 20:24	04:57 21:25 21:25	04:24 19:52 (PrRR3) 22:06
18	08:35 16:14 17:21	07:36 07:21 17:21	06:24 18:22 16:33 (AP2)	06:02 19:13 (Pr3a) 20:26	04:55 21:27 21:27	04:23 19:51 (PrRR3) 22:06
19	08:34 16:16 17:24	07:33 07:24 17:24	06:21 18:24 16:33 (AP2)	06:00 19:14 (Pr3a) 20:28	04:53 21:29 21:29	04:23 19:49 (PrRR3) 22:07
20	08:32 16:18 17:26	07:31 07:26 17:26	06:19 18:26 16:32 (AP2)	05:57 19:15 (Pr3a) 20:30	04:52 21:31 21:31	04:23 19:49 (PrRR3) 22:07
21	08:31 16:20 17:28	07:28 07:26 17:28	06:16 18:28 16:32 (AP2)	05:55 19:16 (Pr3a) 20:32	04:50 21:33 21:33	04:24 19:48 (PrRR3) 22:07
22	08:30 16:22 17:30	07:26 07:26 17:30	06:13 18:30 16:32 (AP2)	05:52 19:17 (Pr3a) 20:34	04:48 21:35 21:35	04:24 19:48 (PrRR3) 22:08
23	08:28 16:24 17:32	07:24 07:32 17:32	06:11 18:32 16:32 (AP2)	05:50 19:18 (Pr3a) 20:36	04:46 21:37 21:37	04:24 19:48 (PrRR3) 22:08
24	08:26 16:26 17:35	07:21 07:35 17:35	06:08 18:34 16:33 (AP2)	05:47 19:19 (Pr3a) 20:39	04:45 21:38 21:38	04:24 19:47 (PrRR3) 22:08
25	08:25 16:28 17:37	07:19 07:37 17:37	06:05 18:36 16:33 (AP2)	05:45 19:20 (Pr3a) 20:41	04:43 21:39 21:39	04:25 19:48 (PrRR3) 22:08
26	08:23 16:30 17:39	07:16 07:39 17:39	06:03 18:38 16:35 (AP2)	05:42 19:21 (Pr3a) 20:43	04:42 21:41 21:41	04:25 19:48 (PrRR3) 22:08
27	08:21 16:32 17:41	07:14 07:41 17:41	06:00 18:40 16:36 (AP2)	05:40 19:22 (Pr3a) 20:45	04:40 21:43 21:43	04:26 19:48 (PrRR3) 22:08
28	08:20 16:35 17:43	07:11 07:43 17:43	05:57 18:43 16:43 (AP2)	05:38 19:23 (Pr3a) 20:47	04:39 21:44 21:44	04:26 19:47 (PrRR3) 22:08
29	08:18 16:37 17:45	07:09 07:45 17:45	05:55 18:45 16:43 (AP2)	05:35 19:24 (Pr3a) 20:49	04:38 21:46 21:46	04:27 19:47 (PrRR3) 22:07
30	08:16 16:39 17:47	07:07 07:47 17:47	05:52 18:47 16:43 (AP2)	05:33 19:25 (Pr3a) 20:51	04:36 21:48 21:48	04:27 19:47 (PrRR3) 22:07
31	08:14 16:41 17:49	07:05 07:49 17:49	05:49 18:49 16:43 (AP2)	05:30 19:26 (Pr3a) 20:53	04:35 21:49 21:49	04:26 19:47 (PrRR3) 22:07
Potential sun hours	236	266	366	426	507	528
Total, worst case		217	371	469	1023	1430
Sun reduction		0,23	0,39	0,44	0,56	0,57
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		0,23	0,39	0,44	0,56	0,57
Total, real		49	145	207	576	812

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Sporanu majas - Shadow Receptor:  $1,0 \times 1,0$  Azimuth:  $3,1^\circ$  Slope:  $90,0^\circ$  (538)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July			August			September			October			November		December	
1	04:28		19:53 (PrRR3)	05:14		20:09 (PrRR3)	06:15			07:15		17:53 (AP6.1)	07:20		08:22	
	22:06	48	20:41 (PrRR3)	21:25	21	20:30 (PrRR3)	20:12			18:51	6	17:59 (AP6.1)	16:34		15:43	
2	04:29		19:53 (PrRR3)	05:16		19:59 (Pr25)	06:17		18:41 (Pr3a)	07:17		17:50 (AP6.1)	07:22		08:23	
	22:06	47	20:40 (PrRR3)	21:23	22	20:27 (PrRR3)	20:09	10	18:51 (Pr3a)	18:49	11	18:01 (AP6.1)	16:32		15:42	
3	04:30		19:53 (PrRR3)	05:18		19:56 (Pr25)	06:19		18:38 (Pr3a)	07:19		17:48 (AP6.1)	07:25		08:25	
	22:05	48	20:41 (PrRR3)	21:21	19	20:23 (PrRR3)	20:07	16	18:54 (Pr3a)	18:46	14	18:02 (AP6.1)	16:30		15:41	
4	04:31		19:53 (PrRR3)	05:20		19:55 (Pr25)	06:21		18:36 (Pr3a)	07:21		17:47 (AP6.1)	07:27		08:27	
	22:05	48	20:41 (PrRR3)	21:19	15	20:10 (Pr25)	20:04	20	18:56 (Pr3a)	18:44	16	18:03 (AP6.1)	16:27		15:41	
5	04:32		19:53 (PrRR3)	05:21		19:53 (Pr25)	06:23		18:33 (Pr3a)	07:23		17:45 (AP6.1)	07:29		08:28	
	22:04	48	20:41 (PrRR3)	21:17	19	20:12 (Pr25)	20:01	23	18:56 (Pr3a)	18:41	18	18:03 (AP6.1)	16:25		15:40	
6	04:33		19:54 (PrRR3)	05:23		19:51 (Pr25)	06:25		18:32 (Pr3a)	07:25		17:45 (AP6.1)	07:31		08:30	
	22:03	48	20:42 (PrRR3)	21:15	21	20:12 (Pr25)	19:59	25	18:57 (Pr3a)	18:38	18	18:03 (AP6.1)	16:23		15:39	
7	04:34		19:54 (PrRR3)	05:25		19:51 (Pr25)	06:27		18:31 (Pr3a)	07:27		17:44 (AP6.1)	07:33		08:31	
	22:03	48	20:42 (PrRR3)	21:13	22	20:13 (Pr25)	19:56	26	18:57 (Pr3a)	18:36	19	18:03 (AP6.1)	16:21		15:38	
8	04:35		19:54 (PrRR3)	05:27		19:50 (Pr25)	06:29		18:30 (Pr3a)	07:29		17:44 (AP6.1)	07:35		08:33	
	22:02	48	20:42 (PrRR3)	21:11	24	20:14 (Pr25)	19:53	28	18:58 (Pr3a)	18:33	18	18:02 (AP6.1)	16:19		15:38	
9	04:36		19:54 (PrRR3)	05:29		19:49 (Pr25)	06:31		18:29 (Pr3a)	07:31		17:44 (AP6.1)	07:38		08:34	
	22:01	48	20:42 (PrRR3)	21:08	25	20:14 (Pr25)	19:51	29	18:58 (Pr3a)	18:30	15	17:59 (AP6.1)	16:17		15:37	
10	04:38		19:54 (PrRR3)	05:31		19:49 (Pr25)	06:33		18:28 (Pr3a)	07:34		17:44 (AP6.1)	07:40		08:35	
	22:00	48	20:42 (PrRR3)	21:06	26	20:15 (Pr25)	19:48	30	18:58 (Pr3a)	18:28	12	17:56 (AP6.1)	16:15		15:37	
11	04:39		19:55 (PrRR3)	05:33		19:48 (Pr25)	06:35		18:28 (Pr3a)	07:36		17:46 (AP6.1)	07:42		08:37	
	21:59	48	20:43 (PrRR3)	21:04	26	20:14 (Pr25)	19:45	30	18:58 (Pr3a)	18:25	8	17:54 (AP6.1)	16:13		15:37	
12	04:40		19:55 (PrRR3)	05:35		19:48 (Pr25)	06:37		18:27 (Pr3a)	07:38		17:48 (AP6.1)	07:44		08:38	
	21:58	47	20:42 (PrRR3)	21:02	26	20:14 (Pr25)	19:43	30	18:57 (Pr3a)	18:23	3	17:51 (AP6.1)	16:11		15:36	
13	04:42		19:55 (PrRR3)	05:37		19:48 (Pr25)	06:39		18:27 (Pr3a)	07:40			07:46		08:39	
	21:57	47	20:42 (PrRR3)	20:59	26	20:14 (Pr25)	19:40	30	18:57 (Pr3a)	18:20			16:09		15:36	
14	04:43		19:55 (PrRR3)	05:39		19:48 (Pr25)	06:41		18:27 (Pr3a)	07:42		17:10 (AP2)	07:48		08:40	
	21:55	47	20:42 (PrRR3)	20:57	26	20:14 (Pr25)	19:37	29	18:56 (Pr3a)	18:17	8	17:18 (AP2)	16:07		15:36	
15	04:44		19:56 (PrRR3)	05:41		19:48 (Pr25)	06:43		18:28 (Pr3a)	07:44		17:07 (AP2)	07:50		08:41	
	21:54	46	20:42 (PrRR3)	20:54	26	20:14 (Pr25)	19:34	27	18:55 (Pr3a)	18:15	13	17:20 (AP2)	16:06		15:36	
16	04:46		19:56 (PrRR3)	05:43		19:48 (Pr25)	06:45		18:28 (Pr3a)	07:46		17:06 (AP2)	07:53		08:42	
	21:53	46	20:42 (PrRR3)	20:52	26	20:14 (Pr25)	19:32	26	18:54 (Pr3a)	18:12	16	17:22 (AP2)	16:04		15:36	
17	04:47		19:56 (PrRR3)	05:45		19:48 (Pr25)	06:47		18:29 (Pr3a)	07:48		17:05 (AP2)	07:55		08:43	
	21:51	45	20:41 (PrRR3)	20:50	25	20:13 (Pr25)	19:29	24	18:53 (Pr3a)	18:10	18	17:23 (AP2)	16:02		15:36	
18	04:49		19:57 (PrRR3)	05:47		19:48 (Pr25)	06:49		18:30 (Pr3a)	07:50		17:04 (AP2)	07:57		08:44	
	21:50	45	20:42 (PrRR3)	20:47	23	20:11 (Pr25)	19:26	21	18:51 (Pr3a)	18:07	19	17:23 (AP2)	16:01		15:36	
19	04:51		19:57 (PrRR3)	05:49		19:49 (Pr25)	06:51		18:30 (Pr3a)	07:52		17:03 (AP2)	07:59		08:45	
	21:49	44	20:41 (PrRR3)	20:45	21	20:10 (Pr25)	19:24	18	18:48 (Pr3a)	18:05	20	17:23 (AP2)	15:59		15:36	
20	04:52		19:58 (PrRR3)	05:51		19:50 (Pr25)	06:53		18:32 (Pr3a)	07:54		17:03 (AP2)	08:01		08:45	
	21:47	43	20:41 (PrRR3)	20:42	19	20:09 (Pr25)	19:21	13	18:45 (Pr3a)	18:02	21	17:24 (AP2)	15:57		15:37	
21	04:54		19:58 (PrRR3)	05:53		19:51 (Pr25)	06:55			07:57		17:03 (AP2)	08:03		08:46	
	21:45	42	20:40 (PrRR3)	20:40	16	20:07 (Pr25)	19:18			18:00	20	17:23 (AP2)	15:56		15:37	
22	04:56		19:59 (PrRR3)	05:55		19:53 (Pr25)	06:57			07:59		17:02 (AP2)	08:05		08:47	
	21:44	41	20:40 (PrRR3)	20:37	12	20:05 (Pr25)	19:16			17:57	21	17:23 (AP2)	15:54		15:38	
23	04:57		19:59 (PrRR3)	05:57		19:58 (Pr25)	06:59			08:01		17:03 (AP2)	08:07		08:47	
	21:42	40	20:39 (PrRR3)	20:35	2	20:00 (Pr25)	19:13			17:55	19	17:22 (AP2)	15:53		15:38	
24	04:59		20:00 (PrRR3)	05:59			07:01			08:03		17:04 (AP2)	08:09		08:48	
	21:40	39	20:39 (PrRR3)	20:32			19:10			17:53	16	17:20 (AP2)	15:51		15:39	
25	05:01		20:01 (PrRR3)	06:01			07:03			07:05		16:04 (AP2)	08:11		08:48	
	21:39	38	20:39 (PrRR3)	20:30			19:08			16:50	13	16:17 (AP2)	15:50		15:39	
26	05:03		20:01 (PrRR3)	06:03			07:05			07:07		16:05 (AP2)	08:13		08:48	
	21:37	37	20:38 (PrRR3)	20:27			19:05			16:48	9	16:14 (AP2)	15:49		15:40	
27	05:04		20:02 (PrRR3)	06:05			07:07			07:09		16:08 (AP2)	08:15		08:48	
	21:35	35	20:37 (PrRR3)	20:25			19:02			16:45	5	16:13 (AP2)	15:48		15:41	
28	05:06		20:04 (PrRR3)	06:07			07:09			07:12			08:16		08:48	
	21:33	33	20:37 (PrRR3)	20:22			19:00			16:43			15:46		15:42	
29	05:08		20:04 (PrRR3)	06:09			07:11			07:14			08:18		08:49	
	21:31	31	20:35 (PrRR3)	20:20			18:57			16:41			15:45		15:43	
30	05:10		20:06 (PrRR3)	06:11			07:13			07:16			08:20		08:49	
	21:29	28	20:34 (PrRR3)	20:17			18:54			16:39			15:44		15:44	
31	05:12		20:07 (PrRR3)	06:13						07:18					08:48	
	21:27	25	20:32 (PrRR3)	20:14						16:36					15:45	
Potential sun hours	529			469			384			324			248		217	
Total, worst case		1326			488			455			376					
Sun reduction		0,47			0,52			0,43			0,29					
Oper. time red.		1,00			1,00			1,00			1,00					
Wind dir. red.		1,00			1,00			1,00			1,00					
Total reduction		0,47			0,52			0,43			0,29					
Total, real		625			255			196			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)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Spridiš i 3 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (575)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:07	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:34 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:24 21:15	06:25 20:01	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:26 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:28 21:11	06:29 20:01	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:37 22:01	05:29 21:08	06:31 20:01	07:31 18:30	07:38 16:17	08:34 15:38
10	08:44 15:59	07:54 17:04	06:45 18:05	06:23 20:10	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 20:01	07:34 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 20:01	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:03	04:40 21:58	05:35 21:02	06:37 20:01	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:57	05:37 20:59	06:39 20:01	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:13	06:35 18:13	06:13 20:18	05:03 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 20:01	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:54	06:43 20:01	07:44 18:15	07:50 16:06	08:41 15:36
16	08:38 16:10	07:40 17:17	06:29 18:18	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 20:01	07:46 18:12	07:53 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 20:01	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 20:01	07:50 18:07	07:57 16:01	08:44 15:36
19	08:34 16:16	07:33 17:24	06:21 18:24	06:00 20:28	04:53 21:29	04:24 22:07	04:51 21:48	05:49 20:45	06:51 20:01	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:30	04:24 22:07	04:52 21:47	05:51 20:42	06:53 20:01	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 20:01	07:57 18:00	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 20:01	07:59 17:58	08:05 15:54	08:47 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:37	04:47 21:36	04:24 22:08	04:58 21:42	05:57 20:35	06:59 20:01	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:25 22:08	04:59 21:40	05:59 20:32	07:01 20:01	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 20:01	08:05 17:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 20:01	08:07 17:48	08:13 15:49	08:48 15:40
27	08:21 16:33	07:14 17:41	06:00 18:40	05:40 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:05 20:25	07:07 20:01	08:09 17:46	08:15 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:57 18:43	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	07:09 20:01	08:12 17:43	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 18:57	08:14 17:41	08:18 15:45	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 18:54	08:16 17:39	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Spulgas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (427)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:14 21:26	06:16 20:12	07:15 18:52	07:20 16:35	08:22 15:44
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:16 21:23	06:18 20:09	07:17 18:49	07:23 16:32	08:23 15:43
3	08:48 15:49	08:09 16:48	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:18 21:21	06:20 20:07	07:19 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:53	06:59 17:55	06:36 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:01	07:24 18:41	07:29 16:26	08:28 15:40
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:01	05:20 21:03	04:30 21:56	04:34 22:03	05:24 21:15	06:26 20:01	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:18 21:05	04:29 21:58	04:35 22:03	05:26 21:13	06:28 20:01	07:28 18:36	07:33 16:22	08:31 15:39
8	08:45 15:57	07:58 16:59	06:51 18:01	06:29 20:06	05:16 21:07	04:28 21:59	04:36 22:02	05:28 21:11	06:30 20:04	07:30 18:33	07:36 16:20	08:33 15:39
9	08:44 15:58	07:56 17:02	06:48 18:03	06:26 20:08	05:13 21:09	04:27 22:00	04:37 22:01	05:30 21:08	06:32 20:01	07:32 18:31	07:38 16:18	08:34 15:38
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:11	04:27 22:01	04:38 22:00	05:32 21:06	06:34 20:04	07:34 18:28	07:40 16:16	08:35 15:38
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:13	04:26 22:02	04:40 21:59	05:34 21:04	06:36 20:01	07:36 18:26	07:42 16:14	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:26 22:03	04:41 21:58	05:36 21:02	06:38 20:01	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:47 17:11	06:38 18:12	06:16 20:16	05:05 21:17	04:25 22:03	04:42 21:57	05:38 20:59	06:40 20:01	07:40 18:20	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:42 20:01	07:42 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:25 22:05	04:45 21:54	05:42 20:55	06:43 20:01	07:44 18:15	07:51 16:06	08:41 15:37
16	08:38 16:11	07:41 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:05	04:47 21:53	05:44 20:52	06:45 20:01	07:46 18:13	07:53 16:04	08:42 15:37
17	08:36 16:12	07:38 17:20	06:27 18:20	06:05 20:24	04:58 21:25	04:24 22:06	04:48 21:51	05:46 20:50	06:47 20:01	07:48 18:10	07:55 16:03	08:43 15:37
18	08:35 16:14	07:36 17:22	06:24 18:22	06:03 20:26	04:56 21:27	04:24 22:06	04:50 21:50	05:48 20:47	06:49 20:01	07:50 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:49	05:50 20:45	06:51 20:01	07:53 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:58 20:30	04:52 21:31	04:24 22:07	04:53 21:47	05:52 20:42	06:53 20:01	07:55 18:03	08:01 15:58	08:45 15:37
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:33	04:50 21:32	04:24 22:07	04:55 21:45	05:54 20:40	06:55 20:01	07:57 18:00	08:03 15:56	08:46 15:38
22	08:30 16:22	07:26 17:31	06:14 18:30	05:53 20:35	04:49 21:34	04:24 22:08	04:56 21:44	05:56 20:38	06:57 20:01	07:59 17:58	08:05 15:55	08:47 15:38
23	08:28 16:25	07:24 17:33	06:11 18:32	05:50 20:37	04:47 21:36	04:25 22:08	04:58 21:42	05:58 20:35	06:59 20:01	08:01 17:55	08:07 15:53	08:47 15:39
24	08:26 16:27	07:21 17:35	06:08 18:35	05:48 20:39	04:46 21:38	04:25 22:08	05:00 21:40	06:00 20:33	07:01 20:01	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:29	07:19 17:37	06:06 18:37	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:02 20:30	07:03 20:01	08:05 17:51	08:11 15:51	08:48 15:40
26	08:23 16:31	07:16 17:39	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:03 21:37	06:04 20:27	07:05 20:01	08:07 17:48	08:13 15:49	08:48 15:41
27	08:22 16:33	07:14 17:42	06:00 18:41	05:41 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:06 20:25	07:07 20:01	08:09 17:46	08:15 15:48	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:09 20:01	08:12 17:44	08:16 15:47	08:48 15:43
29	08:18 16:37		06:55 19:45	05:36 20:49	04:38 21:46	04:28 22:07	05:09 21:31	06:10 20:20	07:11 18:57	08:14 17:41	08:18 15:46	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:11 21:29	06:12 20:17	07:13 18:55	08:16 17:39	08:20 15:45	08:48 15:44
31	08:14 16:42		06:50 19:49		04:36 21:49		05:12 21:28	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Stikani - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (499)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:15	06:17	07:17	07:22	08:23
	15:47	16:45	17:47	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:05	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Sturīši (kad. apz. 76740020069001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (475) Sunshine probability S (Average daily sunshine hours) []

### Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:07	21:26	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:24
	15:47	16:45	17:48	19:53	20:55	21:52	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:09	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:21	20:06	18:46	16:29	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:36
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:38	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:31	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:08	21:46	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:34	18:34	20:39	21:38	22:08	21:41	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:15	08:48
	16:32	17:41	18:40	20:45	21:43	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:49
	16:34	17:43	18:42	20:47	21:44	22:08	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:28	20:14		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Sturīši (kad. apz. 76740020069009) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (604) Sunshine probability S (Average daily sunshine hours) []

### Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:07	21:26	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:24
	15:47	16:45	17:48	19:53	20:55	21:52	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:09	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:21	20:06	18:46	16:29	15:41
4	08:47	08:07	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:36
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:38	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:31	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:08	21:45	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:34	18:34	20:39	21:38	22:08	21:41	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:15	08:48
	16:32	17:41	18:40	20:45	21:43	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:49
	16:34	17:43	18:42	20:47	21:44	22:08	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:28	20:14		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Tebeci - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (463)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	January		February		March		April	May	June
1	08:49	10:21 (AP6.1)	08:13	08:44 (Pr3a)	07:09	08:06 (Pr25)	06:47	05:31	04:34
	15:46	60 15:00 (Pr12)	16:43	45 14:29 (Pr11)	17:46	51 16:48 (O6)	19:51	20:53	21:50
2	08:48	10:22 (AP6.1)	08:11	08:43 (Pr3a)	07:06	08:07 (Pr25)	06:44	05:28	04:33
	15:48	60 15:00 (Pr12)	16:46	44 14:28 (Pr11)	17:48	47 16:47 (O6)	19:53	20:55	21:52
3	08:48	10:24 (AP6.1)	08:09	08:43 (Pr3a)	07:04	08:10 (Pr25)	06:42	05:26	04:32
	15:49	58 15:02 (Pr12)	16:48	40 14:26 (Pr11)	17:50	40 16:47 (O6)	19:55	20:57	21:53
4	08:48	13:48 (Pr11)	08:07	08:44 (Pr3a)	07:01	16:16 (O6)	06:39	05:24	04:31
	15:50	56 15:02 (Pr12)	16:50	35 14:24 (Pr11)	17:52	30 16:46 (O6)	19:57	20:59	21:54
5	08:47	13:48 (Pr11)	08:05	08:43 (Pr3a)	06:58	16:16 (O6)	06:36	05:22	04:30
	15:52	57 15:03 (Pr12)	16:52	22 14:17 (Pr11)	17:54	29 16:45 (O6)	19:59	21:02	21:56
6	08:47	13:49 (Pr11)	08:03	08:43 (Pr3a)	06:56	16:18 (O6)	06:34	05:19	04:29
	15:53	59 15:05 (Pr12)	16:55	20 09:03 (Pr3a)	17:56	26 16:44 (O6)	20:01	21:04	21:57
7	08:46	13:49 (Pr11)	08:01	08:44 (Pr3a)	06:53	16:18 (O6)	06:31	05:17	04:28
	15:55	59 15:05 (Pr12)	16:57	20 09:04 (Pr3a)	17:59	24 16:42 (O6)	20:03	21:06	21:58
8	08:45	13:49 (Pr11)	07:58	08:45 (Pr3a)	06:51	16:20 (O6)	06:28	05:15	04:28
	15:56	61 15:06 (Pr12)	16:59	19 09:04 (Pr3a)	18:01	20 16:40 (O6)	20:06	21:08	21:59
9	08:45	13:49 (Pr11)	07:56	08:45 (Pr3a)	06:48	16:23 (O6)	06:26	05:13	04:27
	15:58	62 15:07 (Pr12)	17:01	17 09:02 (Pr3a)	18:03	15 16:38 (O6)	20:08	21:10	22:00
10	08:44	13:50 (Pr11)	07:54	08:46 (Pr3a)	06:45	16:27 (O6)	06:23	05:11	04:26
	15:59	63 15:08 (Pr12)	17:04	16 09:02 (Pr3a)	18:05	5 16:32 (O6)	20:10	21:12	22:01
11	08:43	13:49 (Pr11)	07:52	08:47 (Pr3a)	06:43		06:20	05:09	04:26
	16:01	65 15:08 (Pr12)	17:06	13 09:00 (Pr3a)	18:07		20:12	21:14	22:02
12	08:42	13:50 (Pr11)	07:50	08:50 (Pr3a)	06:40		06:18	05:07	04:25
	16:03	64 15:08 (Pr12)	17:08	8 08:58 (Pr3a)	18:09		20:14	21:16	22:03
13	08:41	13:50 (Pr11)	07:47		06:38		06:15	05:05	04:25
	16:05	65 15:09 (Pr12)	17:10		18:11		20:16	21:18	22:04
14	08:40	13:51 (Pr11)	07:45		06:35		06:13	05:03	04:24
	16:06	66 15:10 (Pr12)	17:13		18:13		20:18	21:19	22:04
15	08:39	13:50 (Pr11)	07:43	08:15 (Pr25)	06:32		06:10	05:01	04:24
	16:08	67 15:10 (Pr12)	17:15	3 08:18 (Pr25)	18:16		20:20	21:21	22:05
16	08:38	13:51 (Pr11)	07:41	08:10 (Pr25)	06:30		06:07	04:59	04:24
	16:10	67 15:11 (Pr12)	17:17	12 08:22 (Pr25)	18:18		20:22	21:23	22:06
17	08:37	13:51 (Pr11)	07:38	08:08 (Pr25)	06:27		06:05	04:57	04:24
	16:12	68 15:11 (Pr12)	17:19	29 16:39 (O6)	18:20		20:24	21:25	22:06
18	08:35	13:52 (Pr11)	07:36	08:06 (Pr25)	06:24		06:02	04:55	04:24
	16:14	68 15:12 (Pr12)	17:21	37 16:41 (O6)	18:22		20:26	21:27	22:07
19	08:34	13:52 (Pr11)	07:33	08:06 (Pr25)	06:22		06:00	04:53	04:23
	16:16	67 15:12 (Pr12)	17:24	43 16:44 (O6)	18:24		20:28	21:29	22:07
20	08:33	13:52 (Pr11)	07:31	08:04 (Pr25)	06:19		05:57	04:52	04:24
	16:18	67 15:12 (Pr12)	17:26	48 16:45 (O6)	18:26		20:30	21:31	22:07
21	08:31	13:53 (Pr11)	07:29	08:04 (Pr25)	06:16		05:55	04:50	04:24
	16:20	67 15:13 (Pr12)	17:28	51 16:46 (O6)	18:28		20:33	21:33	22:08
22	08:30	13:53 (Pr11)	07:26	08:03 (Pr25)	06:14		05:52	04:48	04:24
	16:22	65 15:12 (Pr12)	17:30	55 16:47 (O6)	18:30		20:35	21:34	22:08
23	08:28	13:54 (Pr11)	07:24	08:04 (Pr25)	06:11		05:50	04:47	04:24
	16:24	64 15:12 (Pr12)	17:33	56 16:48 (O6)	18:32		20:37	21:36	22:08
24	08:27	13:54 (Pr11)	07:21	08:03 (Pr25)	06:08		05:47	04:45	04:24
	16:26	63 15:12 (Pr12)	17:35	57 16:48 (O6)	18:34		20:39	21:38	22:08
25	08:25	13:54 (Pr11)	07:19	08:03 (Pr25)	06:06		05:45	04:43	04:25
	16:28	62 15:11 (Pr12)	17:37	57 16:48 (O6)	18:36		20:41	21:39	22:08
26	08:23	13:56 (Pr11)	07:16	08:04 (Pr25)	06:03		05:43	04:42	04:25
	16:30	59 15:12 (Pr12)	17:39	56 16:48 (O6)	18:39		20:43	21:41	22:08
27	08:22	13:57 (Pr11)	07:14	08:04 (Pr25)	06:00		05:40	04:41	04:26
	16:33	56 15:11 (Pr12)	17:41	55 16:48 (O6)	18:41		20:45	21:43	22:08
28	08:20	08:52 (Pr3a)	07:11	08:05 (Pr25)	05:58		05:38	04:39	04:26
	16:35	57 15:10 (Pr12)	17:43	55 16:49 (O6)	18:43		20:47	21:44	22:08
29	08:18	08:50 (Pr3a)			06:55		05:35	04:38	04:27
	16:37	57 15:09 (Pr12)			19:45		20:49	21:46	22:07
30	08:16	08:47 (Pr3a)			06:52		05:33	04:37	04:28
	16:39	54 15:06 (Pr12)			19:47		20:51	21:47	22:07
31	08:15	08:45 (Pr3a)			06:49			04:35	
	16:41	46 14:30 (Pr11)			19:49			21:49	
Potential sun hours	236		266		366		426	507	528
Total, worst case	1909		913		287				
Sun reduction	0,13		0,23		0,39				
Oper. time red.	1,00		1,00		1,00				
Wind dir. red.	1,00		1,00		1,00				
Total reduction	0,13		0,23		0,39				
Total, real	256		206		112				

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

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0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Tebeci - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (463)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:28 22:07	05:14 21:26	06:15 20:12	07:15 18:52	07:20 16:34	08:16 (Pr3a) 15:43 65
2	04:29 22:06	05:16 21:24	06:17 20:09	07:17 18:49	07:23 16:32	08:31 (Pr3a) 15:42 63
3	04:30 22:06	05:18 21:22	06:19 20:07	07:19 18:46	07:25 16:30	08:32 (Pr3a) 15:41 61
4	04:31 22:05	05:20 21:20	06:21 20:04	07:21 18:44	07:27 16:28	08:33 (Pr3a) 15:41 61
5	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:33 (Pr3a) 15:40 59
6	04:33 22:04	05:24 21:15	06:25 19:59	07:25 18:38	07:31 16:23	08:33 (Pr3a) 15:39 59
7	04:34 22:03	05:26 21:13	06:27 19:56	07:28 18:36	07:34 16:21	08:33 (Pr3a) 15:39 57
8	04:35 22:02	05:27 21:11	06:29 19:53	07:30 18:33	07:36 16:19	08:33 (Pr3a) 15:38 56
9	04:36 22:01	05:29 21:09	06:31 19:51	07:32 18:31	07:38 16:17	08:34 (Pr3a) 15:38 58
10	04:38 22:00	05:31 21:06	06:33 19:48	07:34 18:28	07:40 16:15	08:34 (Pr3a) 15:37 60
11	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 (Pr3a) 15:37 60
12	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	07:44 16:11	08:38 (Pr3a) 15:36 61
13	04:42 21:57	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:38 (Pr3a) 15:36 60
14	04:43 21:56	05:39 20:57	06:41 19:37	07:42 18:18	07:49 16:08	08:38 (Pr3a) 15:36 59
15	04:45 21:54	05:41 20:55	06:43 19:35	07:44 18:15	07:51 16:06	08:39 (Pr3a) 15:36 59
16	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:13	07:53 16:04	08:42 (Pr3a) 15:36 60
17	04:48 21:52	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 (Pr3a) 15:36 57
18	04:49 21:50	05:47 20:47	06:49 19:27	07:50 18:07	07:57 16:01	08:44 (Pr3a) 15:36 59
19	04:51 21:49	05:49 20:45	06:51 19:24	07:53 18:05	07:59 15:59	08:45 (Pr3a) 15:37 57
20	04:52 21:47	05:51 20:43	06:53 19:21	07:55 18:03	08:01 15:57	08:46 (Pr3a) 15:37 58
21	04:54 21:46	05:53 20:40	06:55 19:19	07:57 18:00	08:03 15:56	08:46 (Pr3a) 15:37 59
22	04:56 21:44	05:55 20:38	06:57 19:16	07:59 17:58	08:05 15:54	08:47 (Pr3a) 15:38 59
23	04:57 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 (Pr3a) 15:38 58
24	04:59 21:41	05:59 20:33	07:01 19:10	08:03 17:53	08:09 15:52	08:48 (Pr3a) 15:39 57
25	05:01 21:39	06:01 20:30	07:03 19:08	07:05 16:50	08:11 15:50	08:48 (Pr3a) 15:40 59
26	05:03 21:37	06:03 20:27	07:05 19:05	07:07 16:48	08:13 15:49	08:48 (Pr3a) 15:40 58
27	05:05 21:35	06:05 20:25	07:07 19:02	07:10 16:46	08:15 15:48	08:49 (Pr3a) 15:41 60
28	05:06 21:34	06:07 20:22	07:09 19:00	07:12 16:43	08:17 15:46	08:49 (Pr3a) 15:42 60
29	05:08 21:32	06:09 20:20	07:11 18:57	07:14 16:41	08:18 15:45	08:49 (Pr3a) 15:43 59
30	05:10 21:30	06:11 20:17	07:13 18:54	07:16 16:39	08:20 15:44	08:49 (Pr3a) 15:44 60
31	05:12 21:28	06:13 20:15		07:18 16:36	08:16 (Pr3a) 08:29 (Pr3a)	08:49 (Pr3a) 15:45 61
Potential sun hours	529	469	384	324	248	217
Total, worst case				935	1529	1839
Sun reduction				0,29	0,08	0,08
Oper. time red.				1,00	1,00	1,00
Wind dir. red.				1,00	1,00	1,00
Total reduction				0,29	0,08	0,08
Total, real				271	115	155

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Torna iela 10 - Shadow Receptor:  $1,0 \times 1,0$  Azimuth:  $3,1^\circ$  Slope:  $90,0^\circ$  (544)  
 Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Torna iela 11 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (528)  
 Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Torna iela 12 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (599)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
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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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Torna iela 2 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (525)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

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Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Torna iela 3 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (598)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		05:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Torna iela 3A - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (531)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		05:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Torna iela 4 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (521)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Torna iela 5 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (542)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Torna iela 6 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (517)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Torna iela 7 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (529)  
 Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		05:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Torna iela 8 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (546)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		05:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Torna iela 9 - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (520)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Tumš upe (kad. apz. 76820020140001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (448)

### Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12	07:09	06:47	05:31	04:35	04:29	05:15	06:16	07:16	07:20	08:22
	15:47	16:44	17:46	19:51	20:53	21:50	22:06	21:25	20:12	18:52	16:35	15:44
2	08:48	08:10	07:06	06:45	05:29	04:34	04:30	05:17	06:18	07:18	07:23	08:23
	15:49	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:33	15:43
3	08:47	08:09	07:04	06:42	05:27	04:33	04:31	05:19	06:20	07:20	07:25	08:25
	15:50	16:49	17:50	19:55	20:57	21:53	22:05	21:21	20:07	18:47	16:30	15:42
4	08:47	08:07	07:01	06:39	05:25	04:32	04:32	05:20	06:22	07:22	07:27	08:27
	15:51	16:51	17:53	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:42
5	08:47	08:05	06:59	06:37	05:22	04:31	04:33	05:22	06:24	07:24	07:29	08:28
	15:53	16:53	17:55	19:59	21:01	21:55	22:04	21:17	20:02	18:41	16:26	15:41
6	08:46	08:02	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:01	21:03	21:56	22:03	21:15	19:59	18:39	16:24	15:40
7	08:46	08:00	06:53	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:33	08:31
	15:56	16:57	17:59	20:04	21:05	21:57	22:02	21:13	19:56	18:36	16:22	15:40
8	08:45	07:58	06:51	06:29	05:16	04:29	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	17:00	18:01	20:06	21:07	21:58	22:02	21:11	19:54	18:34	16:20	15:39
9	08:44	07:56	06:48	06:26	05:14	04:28	04:38	05:30	06:32	07:32	07:38	08:34
	15:59	17:02	18:03	20:08	21:09	22:00	22:01	21:08	19:51	18:31	16:18	15:39
10	08:43	07:54	06:46	06:24	05:12	04:27	04:39	05:32	06:34	07:34	07:40	08:35
	16:00	17:04	18:05	20:10	21:11	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:10	04:27	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:07	20:12	21:13	22:01	21:59	21:04	19:46	18:26	16:14	15:38
12	08:42	07:50	06:40	06:18	05:08	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:04	17:09	18:10	20:14	21:15	22:02	21:58	21:02	19:43	18:23	16:12	15:38
13	08:41	07:47	06:38	06:16	05:06	04:26	04:43	05:38	06:40	07:40	07:46	08:39
	16:05	17:11	18:12	20:16	21:17	22:03	21:56	20:59	19:40	18:21	16:10	15:37
14	08:40	07:45	06:35	06:13	05:04	04:25	04:44	05:40	06:42	07:42	07:48	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:55	20:57	19:38	18:18	16:08	15:37
15	08:39	07:43	06:32	06:11	05:02	04:25	04:46	05:42	06:44	07:44	07:50	08:41
	16:09	17:15	18:16	20:20	21:21	22:04	21:54	20:55	19:35	18:16	16:07	15:37
16	08:37	07:40	06:30	06:08	05:00	04:25	04:47	05:44	06:46	07:46	07:53	08:42
	16:11	17:18	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:13	16:05	15:37
17	08:36	07:38	06:27	06:06	04:58	04:25	04:49	05:46	06:48	07:48	07:55	08:43
	16:13	17:20	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:03	15:37
18	08:35	07:36	06:25	06:03	04:56	04:25	04:50	05:48	06:50	07:50	07:57	08:44
	16:15	17:22	18:22	20:26	21:27	22:06	21:50	20:47	19:27	18:08	16:01	15:37
19	08:34	07:33	06:22	06:00	04:54	04:25	04:52	05:50	06:52	07:53	07:59	08:44
	16:17	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:06	16:00	15:38
20	08:32	07:31	06:19	05:58	04:53	04:25	04:53	05:52	06:54	07:55	08:01	08:45
	16:19	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:03	15:58	15:38
21	08:31	07:29	06:17	05:55	04:51	04:25	04:55	05:54	06:56	07:57	08:03	08:46
	16:21	17:29	18:28	20:32	21:32	22:07	21:45	20:40	19:19	18:01	15:57	15:38
22	08:29	07:26	06:14	05:53	04:49	04:25	04:57	05:56	06:58	07:59	08:05	08:46
	16:23	17:31	18:30	20:35	21:34	22:07	21:44	20:38	19:16	17:58	15:55	15:39
23	08:28	07:24	06:11	05:51	04:48	04:25	04:58	05:58	06:59	08:01	08:07	08:47
	16:25	17:33	18:33	20:37	21:36	22:07	21:42	20:35	19:13	17:56	15:54	15:39
24	08:26	07:21	06:09	05:48	04:46	04:25	05:00	06:00	07:01	08:03	08:09	08:47
	16:27	17:35	18:35	20:39	21:37	22:08	21:40	20:33	19:11	17:53	15:52	15:40
25	08:25	07:19	06:06	05:46	04:44	04:26	05:02	06:02	07:03	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	16:51	15:51	15:41
26	08:23	07:16	06:03	05:43	04:43	04:26	05:04	06:04	07:05	08:07	08:13	08:48
	16:31	17:40	18:39	20:43	21:41	22:08	21:37	20:27	19:05	16:49	15:50	15:41
27	08:21	07:14	06:01	05:41	04:42	04:27	05:05	06:06	07:07	08:09	08:14	08:48
	16:33	17:42	18:41	20:45	21:42	22:07	21:35	20:25	19:03	16:46	15:49	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:09	08:12	08:16	08:48
	16:35	17:44	18:43	20:47	21:44	22:07	21:33	20:22	19:00	16:44	15:47	15:43
29	08:18		06:55	05:36	04:39	04:28	05:09	06:10	07:11	08:14	08:18	08:48
	16:38		19:45	20:49	21:45	22:07	21:31	20:20	18:57	16:42	15:46	15:44
30	08:16		06:53	05:34	04:38	04:29	05:11	06:12	07:13	08:16	08:20	08:48
	16:40		19:47	20:51	21:47	22:07	21:29	20:17	18:55	16:39	15:45	15:45
31	08:14		06:50		04:36		05:13	06:14		07:18		08:48
	16:42		19:49		21:48		21:27	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	527	528	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Tumš upe (kad. apz. 76820020140006) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (588)

Assumptions for shadow calculations

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:47	08:12 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:15 21:25	06:16 20:12	07:16 18:52	07:20 16:35	08:22 15:44
2	08:48 15:49	08:10 16:46	07:06 17:48	06:45 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:17 21:23	06:18 20:09	07:18 18:49	07:23 16:33	08:23 15:43
3	08:47 15:50	08:09 16:49	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:19 21:21	06:20 20:07	07:20 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:51	07:01 17:53	06:39 19:57	05:25 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:22 18:44	07:27 16:28	08:27 15:42
5	08:47 15:53	08:05 16:53	06:59 17:55	06:37 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:02	07:24 18:41	07:29 16:26	08:28 15:41
6	08:46 15:54	08:02 16:55	06:56 17:57	06:34 20:01	05:20 21:03	04:30 21:56	04:34 22:03	05:24 21:15	06:26 20:00	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:56	08:00 16:57	06:53 17:59	06:31 20:04	05:18 21:05	04:29 21:57	04:35 22:02	05:26 21:13	06:28 19:56	07:28 18:36	07:33 16:22	08:31 15:40
8	08:45 15:57	07:58 17:00	06:51 18:01	06:29 20:06	05:16 21:07	04:29 21:58	04:36 22:02	05:28 21:11	06:30 19:54	07:30 18:34	07:36 16:20	08:33 15:39
9	08:44 15:59	07:56 17:02	06:48 18:03	06:26 20:08	05:14 21:09	04:28 22:00	04:38 22:01	05:30 21:08	06:32 19:51	07:32 18:31	07:38 16:18	08:34 15:39
10	08:43 16:00	07:54 17:04	06:46 18:05	06:24 20:10	05:12 21:11	04:27 22:01	04:39 22:00	05:32 21:06	06:34 19:48	07:34 18:28	07:40 16:16	08:35 15:38
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	05:10 21:13	04:27 22:01	04:40 21:59	05:34 21:04	06:36 19:46	07:36 18:26	07:42 16:14	08:37 15:38
12	08:42 16:04	07:50 17:09	06:40 18:10	06:18 20:14	05:08 21:15	04:26 22:02	04:41 21:58	05:36 21:02	06:38 19:43	07:38 18:23	07:44 16:12	08:38 15:38
13	08:41 16:05	07:47 17:11	06:38 18:12	06:16 20:16	05:06 21:17	04:26 22:03	04:43 21:56	05:38 20:59	06:40 19:40	07:40 18:21	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:04 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:42 19:38	07:42 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:32 18:16	06:11 20:20	05:02 21:21	04:25 22:04	04:46 21:54	05:42 20:55	06:44 19:35	07:44 18:16	07:50 16:07	08:41 15:37
16	08:37 16:11	07:40 17:18	06:30 18:18	06:08 20:22	05:00 21:23	04:25 22:05	04:47 21:53	05:44 20:52	06:46 19:32	07:46 18:13	07:53 16:05	08:42 15:37
17	08:36 16:13	07:38 17:20	06:27 18:20	06:06 20:24	04:58 21:25	04:25 22:06	04:49 21:51	05:46 20:50	06:48 19:29	07:48 18:10	07:55 16:03	08:43 15:37
18	08:35 16:15	07:36 17:22	06:25 18:22	06:03 20:26	04:56 21:27	04:25 22:06	04:50 21:50	05:48 20:47	06:50 19:27	07:50 18:08	07:57 16:01	08:44 15:37
19	08:34 16:17	07:33 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:25 22:07	04:52 21:48	05:50 20:45	06:52 19:24	07:53 18:06	07:59 16:00	08:44 15:38
20	08:32 16:19	07:31 17:26	06:19 18:26	05:58 20:30	04:53 21:30	04:25 22:07	04:53 21:47	05:52 20:42	06:54 19:21	07:55 18:03	08:01 15:58	08:45 15:38
21	08:31 16:21	07:29 17:29	06:17 18:28	05:55 20:32	04:51 21:32	04:25 22:07	04:55 21:45	05:54 20:40	06:56 19:19	07:57 18:01	08:03 15:57	08:46 15:38
22	08:29 16:23	07:26 17:31	06:14 18:30	05:53 20:35	04:49 21:34	04:25 22:07	04:57 21:44	05:56 20:38	06:58 19:16	07:59 17:58	08:05 15:55	08:46 15:39
23	08:28 16:25	07:24 17:33	06:11 18:33	05:51 20:37	04:48 21:36	04:25 22:07	04:58 21:42	05:58 20:35	06:59 19:13	08:01 17:56	08:07 15:54	08:47 15:39
24	08:26 16:27	07:21 17:35	06:09 18:35	05:48 20:39	04:46 21:37	04:25 22:08	05:00 21:40	06:00 20:33	07:01 19:11	08:03 17:53	08:09 15:52	08:47 15:40
25	08:25 16:29	07:19 17:37	06:06 18:37	05:46 20:41	04:44 21:39	04:26 22:08	05:02 21:39	06:02 20:30	07:03 19:08	08:05 16:51	08:11 15:51	08:48 15:41
26	08:23 16:31	07:16 17:40	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:04 21:37	06:04 20:27	07:05 19:05	08:07 16:49	08:13 15:50	08:48 15:41
27	08:21 16:33	07:14 17:42	06:01 18:41	05:41 20:45	04:42 21:42	04:27 22:07	05:05 21:35	06:06 20:25	07:07 19:03	08:09 16:46	08:14 15:49	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:09 19:00	08:12 16:44	08:16 15:47	08:48 15:43
29	08:18 16:38		06:55 19:45	05:36 20:49	04:39 21:45	04:28 22:07	05:09 21:31	06:10 20:20	07:11 18:57	08:14 16:42	08:18 15:46	08:48 15:44
30	08:16 16:40		06:53 19:47	05:34 20:51	04:38 21:47	04:29 22:07	05:11 21:29	06:12 20:17	07:13 18:55	08:16 16:39	08:20 15:45	08:48 15:45
31	08:14 16:42		06:50 19:49		04:36 21:48		05:13 21:27	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	527	528	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Vecie Cerini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (570)  
Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:24 21:15	06:25 20:01	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:02	05:26 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:50 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:27 21:10	06:29 19:53	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:37 22:01	05:29 21:08	06:31 19:51	07:31 18:30	07:38 16:17	08:34 15:38
10	08:43 15:59	07:54 17:04	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 19:48	07:33 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:02	04:40 21:58	05:35 21:01	06:37 19:43	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:56	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:13 20:18	05:03 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:54	06:43 19:34	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:18	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	07:52 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	07:57 16:01	08:44 15:36
19	08:34 16:16	07:33 17:24	06:21 18:24	06:00 20:28	04:53 21:29	04:24 22:07	04:51 21:48	05:49 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:30	04:24 22:07	04:52 21:47	05:51 20:42	06:53 19:21	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:07	04:56 21:44	05:55 20:37	06:57 19:16	07:59 17:58	08:05 15:54	08:46 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	04:47 21:36	04:24 22:08	04:58 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:24 22:08	04:59 21:40	05:59 20:32	07:01 19:10	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 19:08	08:05 16:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:40
27	08:21 16:33	07:14 17:41	06:00 18:40	05:40 20:45	04:41 21:42	04:26 22:07	05:05 21:35	06:05 20:25	07:07 19:02	08:09 16:46	08:14 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:57 18:42	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	07:09 19:00	08:12 16:43	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:45	04:27 22:07	05:08 21:31	06:09 20:20	07:11 18:57	08:14 16:41	08:18 15:45	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 18:54	08:16 16:39	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:48		05:12 21:27	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Vecas Zemesbites - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (503)  
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	January	February	March	April	May	June
1	08:48	08:12	07:09	06:47	05:31	04:34
	15:46	16:43	17:45	19:51	20:53	21:50
2	08:48	08:10	07:06	06:44	05:28	04:33
	15:48	16:45	17:48	19:53	20:55	21:51
3	08:48	08:08	07:03	06:41	05:26	04:32
	15:49	16:48	17:50	19:55	20:57	21:53
4	08:47	08:06	07:01	06:39	19:22 (Pr25)	05:24
	15:50	16:50	17:52	19:57	19:29 (Pr25)	20:59
5	08:47	08:04	06:58	06:36	19:20 (Pr25)	05:21
	15:51	16:52	17:54	19:59	19:30 (Pr25)	21:01
6	08:46	08:02	06:56	06:33	19:17 (PrRR3)	05:19
	15:53	16:54	17:56	20:01	19:33 (Pr25)	21:03
7	08:46	08:00	06:53	06:31	19:13 (PrRR3)	05:17
	15:54	16:57	17:58	20:03	19:34 (Pr25)	21:05
8	08:45	07:58	06:50	06:28	19:10 (PrRR3)	05:15
	15:56	16:59	18:01	20:05	19:36 (Pr25)	21:07
9	08:44	07:56	06:48	06:25	19:09 (PrRR3)	05:13
	15:58	17:01	18:03	20:07	19:37 (Pr25)	21:09
10	08:44	07:54	06:45	06:23	19:07 (PrRR3)	05:11
	15:59	17:03	18:05	20:09	19:36 (Pr25)	21:11
11	08:43	07:52	06:43	06:20	19:07 (PrRR3)	05:09
	16:01	17:06	18:07	20:12	19:36 (Pr25)	21:13
12	08:42	07:49	06:40	17:37 (Pr3a)	19:05 (PrRR3)	05:07
	16:03	17:08	18:09	17:40 (Pr3a)	19:35 (Pr25)	21:15
13	08:41	07:47	06:37	17:34 (Pr3a)	19:05 (PrRR3)	05:05
	16:04	17:10	18:11	17:43 (Pr3a)	19:35 (PrRR3)	21:17
14	08:40	07:45	06:35	17:32 (Pr3a)	19:04 (PrRR3)	05:03
	16:06	17:12	18:13	17:45 (Pr3a)	19:35 (PrRR3)	21:19
15	08:39	07:43	06:32	17:30 (Pr3a)	19:04 (PrRR3)	05:01
	16:08	17:15	18:15	17:47 (Pr3a)	19:35 (PrRR3)	21:21
16	08:38	07:40	06:29	17:29 (Pr3a)	19:03 (PrRR3)	04:59
	16:10	17:17	18:17	17:50 (Pr3a)	19:35 (PrRR3)	21:23
17	08:36	07:38	06:27	17:28 (Pr3a)	19:03 (PrRR3)	04:57
	16:12	17:19	18:20	17:50 (Pr3a)	19:35 (PrRR3)	21:25
18	08:35	07:36	06:24	17:28 (Pr3a)	19:03 (PrRR3)	04:55
	16:14	17:21	18:22	17:49 (Pr3a)	19:34 (PrRR3)	21:27
19	08:34	07:33	06:21	17:28 (Pr3a)	19:03 (PrRR3)	04:53
	16:16	17:23	18:24	17:50 (Pr3a)	19:34 (PrRR3)	21:29
20	08:32	07:31	06:19	17:27 (Pr3a)	19:03 (PrRR3)	04:51
	16:18	17:26	18:26	17:49 (Pr3a)	19:32 (PrRR3)	21:30
21	08:31	07:28	06:16	17:27 (Pr3a)	19:04 (PrRR3)	04:50
	16:20	17:28	18:28	17:48 (Pr3a)	19:32 (PrRR3)	21:32
22	08:29	07:26	06:13	17:27 (Pr3a)	19:05 (PrRR3)	04:48
	16:22	17:30	18:30	17:47 (Pr3a)	19:31 (PrRR3)	21:34
23	08:28	07:24	06:11	17:29 (Pr3a)	19:05 (PrRR3)	04:46
	16:24	17:32	18:32	17:46 (Pr3a)	19:29 (PrRR3)	21:36
24	08:26	07:21	06:08	17:30 (Pr3a)	19:06 (PrRR3)	04:45
	16:26	17:35	18:34	17:44 (Pr3a)	19:28 (PrRR3)	21:38
25	08:25	07:19	06:05	17:32 (Pr3a)	19:08 (PrRR3)	04:43
	16:28	17:37	18:36	17:41 (Pr3a)	19:27 (PrRR3)	21:39
26	08:23	07:16	06:03		19:10 (PrRR3)	04:42
	16:30	17:39	18:38		19:24 (PrRR3)	21:41
27	08:21	07:14	06:00		19:13 (PrRR3)	04:40
	16:32	17:41	18:40		19:21 (PrRR3)	21:43
28	08:20	07:11	05:57			04:39
	16:34	17:43	18:42			21:44
29	08:18		06:55			04:38
	16:37		19:45			21:46
30	08:16		06:52			04:36
	16:39		19:47			21:47
31	08:14		06:49			04:35
	16:41		19:49			21:49
Potential sun hours	236	266	366	426	507	528
Total, worst case			231	584		
Sun reduction			0,39	0,44		
Oper. time red.			1,00	1,00		
Wind dir. red.			1,00	1,00		
Total reduction			0,39	0,44		
Total, real			90	258		

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Vecas Zemesbites - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (503)  
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	July	August	September	October	November	December
1	04:28 22:06	05:14 21:25	06:15 20:12	19:06 (PrRR3) 19:35 (Pr25)	07:15 18:15 (Pr3a)	08:22 16:34
2	04:29 22:06	05:16 21:23	06:17 20:09	19:06 (PrRR3) 19:35 (Pr25)	07:17 18:49	08:23 16:32
3	04:30 22:05	05:18 21:21	06:19 20:06	19:07 (PrRR3) 19:35 (Pr25)	07:19 18:46	08:25 16:30
4	04:31 22:05	05:19 21:19	06:21 20:04	19:08 (PrRR3) 19:34 (Pr25)	07:21 18:43	08:27 16:27
5	04:32 22:04	05:21 21:17	06:23 20:01	19:09 (PrRR3) 19:31 (Pr25)	07:23 18:41	08:28 16:25
6	04:33 22:03	05:23 21:15	06:25 19:59	19:12 (PrRR3) 19:28 (Pr25)	07:25 18:38	08:30 16:23
7	04:34 22:03	05:25 21:13	06:27 19:56	19:15 (Pr25) 19:25 (Pr25)	07:27 18:36	08:31 16:21
8	04:35 22:02	05:27 21:11	06:29 19:53	19:16 (Pr25) 19:23 (Pr25)	07:29 18:33	08:33 16:19
9	04:36 22:01	05:29 21:08	06:31 19:51	19:19 (Pr25) 19:20 (Pr25)	07:31 18:30	08:34 16:17
10	04:38 22:00	05:31 21:06	06:33 19:48	07:33 18:28	07:33 18:28	08:35 16:15
11	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:36 18:25	08:37 16:13
12	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	07:38 18:23	08:38 16:11
13	04:42 21:57	05:37 20:59	06:39 19:40	07:40 18:20	07:40 18:20	08:39 16:09
14	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:17	07:42 18:17	08:40 16:07
15	04:44 21:54	05:41 20:54	06:43 19:34	07:44 18:15	07:44 18:15	08:41 16:06
16	04:46 21:53	05:43 20:52	19:20 (PrRR3) 19:29 (PrRR3)	06:45 19:32	07:46 18:12	08:42 16:04
17	04:47 21:51	05:45 20:50	19:17 (PrRR3) 19:32 (PrRR3)	06:47 19:29	07:48 18:10	08:43 16:02
18	04:49 21:50	05:47 20:47	19:13 (PrRR3) 19:33 (PrRR3)	06:49 19:26	18:20 (Pr3a) 18:27 (Pr3a)	07:50 18:07
19	04:51 21:49	05:49 20:45	19:12 (PrRR3) 19:34 (PrRR3)	06:51 19:24	18:17 (Pr3a) 18:30 (Pr3a)	07:52 18:05
20	04:52 21:47	05:51 20:42	19:10 (PrRR3) 19:35 (PrRR3)	06:53 19:21	18:15 (Pr3a) 18:31 (Pr3a)	07:54 18:02
21	04:54 21:45	05:53 20:40	19:09 (PrRR3) 19:36 (PrRR3)	06:55 19:18	18:13 (Pr3a) 18:32 (Pr3a)	07:57 18:00
22	04:56 21:44	05:55 20:37	19:08 (PrRR3) 19:37 (PrRR3)	06:57 19:16	18:12 (Pr3a) 18:32 (Pr3a)	07:59 17:57
23	04:57 21:42	05:57 20:35	19:08 (PrRR3) 19:37 (PrRR3)	06:59 19:13	18:11 (Pr3a) 18:33 (Pr3a)	08:01 17:55
24	04:59 21:40	05:59 20:32	19:07 (PrRR3) 19:37 (PrRR3)	07:01 19:10	18:11 (Pr3a) 18:32 (Pr3a)	08:03 17:53
25	05:01 21:39	06:01 20:30	19:07 (PrRR3) 19:37 (PrRR3)	07:03 19:08	18:10 (Pr3a) 18:32 (Pr3a)	07:05 16:50
26	05:03 21:37	06:03 20:27	19:05 (PrRR3) 19:36 (PrRR3)	07:05 19:05	18:10 (Pr3a) 18:32 (Pr3a)	07:07 16:48
27	05:04 21:35	06:05 20:25	19:05 (PrRR3) 19:36 (PrRR3)	07:07 19:02	18:10 (Pr3a) 18:31 (Pr3a)	07:09 16:45
28	05:06 21:33	06:07 20:22	19:05 (PrRR3) 19:36 (PrRR3)	07:09 18:59	18:10 (Pr3a) 18:29 (Pr3a)	07:12 16:43
29	05:08 21:31	06:09 20:20	19:05 (PrRR3) 19:36 (PrRR3)	07:11 18:57	18:11 (Pr3a) 18:26 (Pr3a)	07:14 16:41
30	05:10 21:29	06:11 20:17	19:05 (PrRR3) 19:35 (PrRR3)	07:13 18:54	18:12 (Pr3a) 18:23 (Pr3a)	07:16 16:38
31	05:12 21:27	06:13 20:14	19:05 (PrRR3) 19:35 (Pr25)	07:18 16:36	07:18 16:36	08:48 15:45
Potential sun hours	529	469	384	324	248	217
Total, worst case					6	
Sun reduction		0,52	0,43	0,29		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		1,00	1,00	1,00		
Total reduction		0,52	0,43	0,29		
Total, real		219	171	2		

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

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0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Veikals - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (561)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Veldres - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (527)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Viesani - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (584)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:46	19:51	20:53	21:50	22:06	21:25	20:12	18:52	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:48	16:46	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:28	15:41
5	08:47	08:04	06:58	06:36	05:22	04:30	04:32	05:22	06:23	07:23	07:29	08:28
	15:52	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:24	06:25	07:25	07:31	08:30
	15:53	16:55	17:56	20:01	21:03	21:56	22:03	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:55	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:39
8	08:45	07:58	06:51	06:28	05:15	04:28	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:01	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:51	18:30	16:17	15:38
10	08:43	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:34	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:43	18:23	16:11	15:37
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:05	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:18	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:50	08:41
	16:08	17:15	18:15	20:20	21:21	22:05	21:54	20:54	19:35	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:18	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:24	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:01	15:36
19	08:34	07:33	06:21	06:00	04:53	04:24	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:37
20	08:32	07:31	06:19	05:57	04:52	04:24	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:58	15:54	15:38
23	08:28	07:24	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:35	18:34	20:39	21:37	22:08	21:40	20:32	19:10	17:53	15:52	15:39
25	08:25	07:19	06:05	05:45	04:44	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:40
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:41	04:26	05:05	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:46	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:16	08:48
	16:35	17:43	18:43	20:47	21:44	22:07	21:33	20:22	19:00	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:45	20:49	21:46	22:07	21:31	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:37	04:28	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Viktorovka - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (468)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []  
Jan. Feb. Mar. Apr. May Jun. Jul. Aug. Sep. Oct. Nov. Dec.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:49	09:28 (Pr25)	08:13	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:21	08:22	09:02 (Pr25)	
2	15:46	16 15:04 (06)	16:43	17:46	19:51	20:53	21:50	22:07	21:26	20:12	18:52	16:34	15:43	41 14:54 (06)	
	08:48	09:27 (Pr25)	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:23	08:24	09:03 (Pr25)	
3	15:48	19 15:05 (06)	16:46	17:48	19:53	20:55	21:52	22:06	21:24	20:09	18:49	16:32	15:42	39 14:54 (06)	
	08:48	09:27 (Pr25)	08:09	07:04	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25	09:05 (Pr25)	
4	15:49	22 15:07 (06)	16:48	17:50	19:55	20:57	21:53	22:06	21:22	20:07	18:46	16:30	15:41	36 14:54 (06)	
	08:48	09:26 (Pr25)	08:07	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27	09:07 (Pr25)	
5	15:50	24 15:07 (06)	16:50	17:52	19:57	21:00	21:54	22:05	21:20	20:04	18:44	16:28	15:41	34 14:54 (06)	
	08:47	09:25 (Pr25)	08:05	06:58	06:36	05:22	04:30	04:32	05:22	06:23	07:23	07:29	08:29	09:09 (Pr25)	
6	15:52	28 15:08 (06)	16:52	17:54	19:59	21:02	21:56	22:05	21:17	20:01	18:41	16:25	15:40	32 14:55 (06)	
	08:47	09:25 (Pr25)	08:03	06:56	06:34	05:19	04:29	04:33	05:24	06:25	07:25	07:31	08:30	09:11 (Pr25)	
7	15:53	29 15:09 (06)	16:55	17:56	20:01	21:04	21:57	22:04	21:15	19:59	18:38	16:23	15:39	30 14:55 (06)	
	08:46	09:24 (Pr25)	08:01	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:28	07:34	08:32	09:12 (Pr25)	
8	15:55	32 15:10 (06)	16:57	17:59	20:03	21:06	21:58	22:03	21:23	19:56	18:36	16:21	15:39	28 14:55 (06)	
	08:45	09:23 (Pr25)	07:58	06:51	06:28	05:15	04:27	04:35	05:27	06:29	07:30	07:36	08:33	09:14 (Pr25)	
9	15:56	34 15:10 (06)	16:59	18:01	20:06	21:08	21:59	22:02	21:11	19:53	18:33	16:19	15:38	24 14:55 (06)	
	08:45	09:22 (Pr25)	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:32	07:38	08:34	09:15 (Pr25)	
10	15:58	37 15:11 (06)	17:01	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:31	16:17	15:37	22 14:55 (06)	
	08:44	09:21 (Pr25)	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:34	07:40	08:36	09:17 (Pr25)	
11	15:59	39 15:12 (06)	17:04	18:05	20:10	21:12	22:01	22:00	21:06	19:48	18:28	16:15	15:37	20 14:55 (06)	
	08:43	09:21 (Pr25)	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37	09:18 (Pr25)	
12	16:01	41 15:13 (06)	17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:45	18:25	16:13	15:37	16 14:54 (06)	
	08:42	09:20 (Pr25)	07:50	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38	14:39 (06)	
13	16:03	41 15:12 (06)	17:08	18:09	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:11	15:36	14 14:53 (06)	
	08:41	09:20 (Pr25)	07:47	06:38	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39	14:41 (06)	
14	16:04	42 15:13 (06)	17:10	18:11	20:16	21:18	22:04	21:57	20:59	19:40	18:20	16:09	15:36	13 14:54 (06)	
	08:40	09:21 (Pr25)	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:49	08:40	14:41 (06)	
15	16:06	42 15:14 (06)	17:12	18:13	20:18	21:20	22:04	21:56	20:57	19:37	18:18	16:08	15:36	12 14:53 (06)	
	08:39	09:21 (Pr25)	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:51	08:42	14:42 (06)	
16	16:08	43 15:14 (06)	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	5 14:41 (06)	11 14:53 (06)	
	08:38	09:21 (Pr25)	07:41	06:30	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:53	09:03 (Pr25)	08:42 14:43 (06)	
17	16:10	43 15:14 (06)	17:17	18:18	20:22	21:23	22:06	21:53	20:52	19:32	18:13	16:04	19 14:45 (06)	10 14:53 (06)	
	08:37	09:21 (Pr25)	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	09:01 (Pr25)	08:43 14:44 (06)	
18	16:12	43 15:14 (06)	17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	26 14:46 (06)	9 14:53 (06)	
	08:35	09:22 (Pr25)	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	09:00 (Pr25)	08:44 14:43 (06)	
19	16:14	43 15:15 (06)	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:27	18:07	16:01	31 14:47 (06)	9 14:52 (06)	
	08:34	09:22 (Pr25)	07:33	06:22	06:00	04:53	04:23	04:51	05:49	06:51	07:53	07:59	09:00 (Pr25)	08:45 14:44 (06)	
20	16:16	43 15:15 (06)	17:24	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	35 14:49 (06)	9 14:53 (06)	
	08:33	09:22 (Pr25)	07:31	06:19	05:57	04:52	04:23	04:52	05:51	06:53	07:55	08:01	08:59 (Pr25)	08:46 14:45 (06)	
21	16:18	40 15:14 (06)	17:26	18:26	20:30	21:31	22:08	21:47	20:43	19:21	18:02	15:57	37 14:49 (06)	8 14:53 (06)	
	08:31	09:24 (Pr25)	07:29	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:59 (Pr25)	08:46 14:45 (06)	
22	16:20	39 15:15 (06)	17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:19	18:00	15:56	39 14:50 (06)	8 14:53 (06)	
	08:30	09:24 (Pr25)	07:26	06:14	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	09:00 (Pr25)	08:47 14:46 (06)	
23	16:22	37 15:14 (06)	17:30	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:58	15:54	39 14:51 (06)	8 14:54 (06)	
	08:28	09:25 (Pr25)	07:24	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:59 (Pr25)	08:47 14:46 (06)	
24	16:24	35 15:14 (06)	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	43 14:52 (06)	8 14:54 (06)	
	08:27	09:26 (Pr25)	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:59 (Pr25)	08:48 14:47 (06)	
25	16:26	30 15:13 (06)	17:35	18:34	20:39	21:38	22:08	21:41	20:33	19:10	17:53	15:51	43 14:52 (06)	9 14:56 (06)	
	08:25	09:27 (Pr25)	07:19	06:06	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:59 (Pr25)	08:48 14:47 (06)	
26	16:28	26 15:12 (06)	17:37	18:36	20:41	21:40	22:08	21:39	20:30	19:08	16:50	15:50	43 14:52 (06)	9 14:56 (06)	
	08:23	09:30 (Pr25)	07:16	06:03	05:43	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:59 (Pr25)	08:48 14:47 (06)	
27	16:30	19 15:12 (06)	17:39	18:39	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	44 14:53 (06)	10 14:57 (06)	
	08:22	15:04 (06)	07:14	06:00	05:40	04:41	04:26	05:05	06:05	07:07	08:10	08:15	09:00 (Pr25)	08:49 14:48 (06)	
28	16:32	5 15:09 (06)	17:41	18:41	20:45	21:43	22:08	21:35	20:25	19:02	16:46	15:48	42 14:53 (06)	10 14:58 (06)	
	08:20		07:11	05:58	05:38	04:39	04:26	05:06	06:07	07:09	07:12	08:17	09:00 (Pr25)	08:49 14:48 (06)	
29	16:35		17:43	18:43	20:47	21:44	22:08	21:34	20:22	19:00	16:43	15:46	42 14:53 (06)	11 14:59 (06)	
	08:18			06:55	05:35	04:38	04:27	05:08	06:09	07:11	07:14	08:19	09:01 (Pr25)	08:49 14:48 (06)	
30	16:37			19:45	20:49	21:46	22:08	21:32	20:20	18:57	16:41	15:45	43 14:54 (06)	12 15:00 (06)	
	08:16			06:52	05:33	04:36	04:28	05:10	06:11	07:13	07:16	08:20	09:02 (Pr25)	08:49 14:49 (06)	
31	16:39			19:47	20:51	21:47	22:07	21:30	20:17	18:54	16:39	15:44	41 14:54 (06)	12 15:01 (06)	
	08:15			06:49		04:35		05:12	06:13		07:18		08:49	14:48 (06)	
Potential sun hours	16:41			19:49		21:49		21:28	20:15		16:36		15:45	14 15:02 (06)	
Total, worst case	235		266	366	426	508	528	529	469	384	324	248	572	528	
Sun reduction		892											0,08	0,08	
Oper. time red.		0,13											1,00	1,00	
Wind dir. red.		1,00											1,00	1,00	
Total reduction		0,13											0,08	0,08	
Total, real		120										43		45	

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Vilcani - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (562)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Vilniši (kad. apz. 76740020245001) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (554)  
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:46	08:12 16:43	07:08 17:45	06:47 19:51	05:30 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:51	07:20 16:34	08:22 15:43
2	08:48 15:47	08:10 16:45	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:41
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	07:21 18:43	07:27 16:27	08:27 15:40
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:23 21:15	06:25 19:58	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:56	07:58 16:59	06:50 18:00	06:28 20:05	05:15 21:07	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:25 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51	07:31 18:30	07:38 16:17	08:34 15:37
10	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:31 21:06	06:33 19:48	07:33 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:11	05:09 21:13	04:25 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:35 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:03	04:40 21:58	05:35 21:01	06:37 19:42	07:38 18:23	07:44 16:11	08:38 15:36
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	19:43 (PrRR3) 19:47 (PrRR3)	05:05 21:17	04:41 22:03	05:37 21:57	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	19:40 (PrRR3) 19:48 (PrRR3)	05:03 21:19	04:43 22:04	05:39 21:55	06:41 19:37	07:42 18:17	07:48 16:07	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	19:39 (PrRR3) 19:51 (PrRR3)	05:01 21:21	04:44 22:05	05:41 21:54	06:43 19:34	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:17	06:07 20:22	19:38 (PrRR3) 19:52 (PrRR3)	04:59 21:23	04:46 22:05	05:43 21:53	06:45 19:32	07:46 18:12	07:52 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	19:38 (PrRR3) 19:54 (PrRR3)	04:57 21:25	04:47 22:06	05:45 21:51	06:47 19:29	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	19:37 (PrRR3) 19:55 (PrRR3)	04:55 21:27	04:49 22:06	05:47 21:50	06:49 19:47 (PrRR3)	07:50 18:07	07:57 16:00	08:44 15:36
19	08:34 16:16	07:33 17:23	06:21 18:24	06:00 20:28	19:37 (PrRR3) 19:56 (PrRR3)	04:53 21:29	04:51 22:07	05:49 21:48	06:51 19:45 (PrRR3)	07:52 18:05	07:59 15:59	08:45 15:36
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	19:36 (PrRR3) 19:54 (PrRR3)	04:51 21:30	04:52 22:07	05:51 21:47	06:53 19:43 (PrRR3)	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	19:37 (PrRR3) 19:54 (PrRR3)	04:50 21:32	04:54 22:07	05:53 21:45	06:55 19:42 (PrRR3)	07:56 18:18	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	19:38 (PrRR3) 19:54 (PrRR3)	04:48 21:34	04:56 22:08	05:55 21:44	06:57 19:41 (PrRR3)	07:59 18:00	08:05 15:54	08:47 15:38
23	08:28 16:24	07:23 17:32	06:11 18:32	05:50 20:36	19:38 (PrRR3) 19:52 (PrRR3)	04:46 21:36	04:57 22:08	05:57 21:42	06:59 19:59 (PrRR3)	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:34	06:08 18:34	05:47 20:39	19:40 (PrRR3) 19:50 (PrRR3)	04:45 21:37	04:59 22:08	05:59 21:40	07:01 19:40 (PrRR3)	08:03 17:53	08:09 15:51	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	19:42 (PrRR3) 19:48 (PrRR3)	04:43 21:39	04:25 22:08	05:01 21:39	06:01 19:40 (PrRR3)	07:03 17:05	08:11 15:50	08:48 15:39
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	19:39 (PrRR3) 19:44 (PrRR3)	04:42 21:41	05:03 22:08	06:03 21:37	06:03 19:56 (PrRR3)	07:05 17:05	08:13 15:49	08:48 15:40
27	08:21 16:32	07:14 17:41	06:00 18:40	05:40 20:45	19:40 (PrRR3) 19:42 (PrRR3)	04:40 21:42	05:04 22:08	06:05 21:35	07:07 19:54 (PrRR3)	07:09 17:02	08:14 15:47	08:48 15:41
28	08:20 16:34	07:11 17:43	05:57 18:42	05:38 20:47	19:39 (PrRR3) 19:44 (PrRR3)	04:39 21:44	05:06 22:07	06:07 21:33	07:09 19:51 (PrRR3)	07:12 16:43	08:16 15:46	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	19:41 (PrRR3) 19:46 (PrRR3)	04:38 21:46	05:08 22:07	06:09 21:31	07:11 19:49 (PrRR3)	07:14 18:57	08:18 15:41	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	19:43 (PrRR3) 19:46 (PrRR3)	04:36 21:47	05:10 22:07	06:11 21:29	07:13 19:46 (PrRR3)	07:16 18:54	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		19:45 (PrRR3) 19:49 (PrRR3)	04:35 21:49	05:12 22:07	06:13 21:27		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case				172				176				
Sun reduction				0,44				0,52				
Oper. time red.				1,00				1,00				
Wind dir. red.				1,00				1,00				
Total reduction				0,44				0,52				
Total, real				76				92				

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

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

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Vilniši (kad. apz. 76740020245004) - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (596)  
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:46	08:12 16:43	07:08 17:45	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:51	07:20 16:34	08:22 15:43
2	08:48 15:47	08:10 16:45	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:41
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04	07:21 18:43	07:27 16:27	08:27 15:40
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:23 21:15	06:25 19:59	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:56	07:58 16:59	06:50 18:00	06:28 20:05	05:15 21:07	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:25 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51	07:31 18:30	07:38 16:17	08:34 15:37
10	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:37 22:00	05:31 21:06	06:33 19:48	07:33 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:11	05:09 21:13	04:25 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:35 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:03	04:40 21:58	05:35 21:01	06:37 19:42	07:38 18:23	07:44 16:11	08:38 15:36
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:57	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	19:45 (PrRR3) 19:48 (PrRR3)	05:03 21:19	04:24 22:04	05:39 20:57	06:41 19:37	07:42 18:17	07:48 16:07	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	19:44 (PrRR3) 19:51 (PrRR3)	05:01 21:21	04:24 22:05	05:41 20:54	06:43 19:34	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:17	06:07 20:22	19:42 (PrRR3) 19:52 (PrRR3)	04:59 21:23	04:24 22:05	05:43 20:52	19:53 (PrRR3) 19:56 (PrRR3)	06:45 19:32	07:46 18:12	07:52 16:04
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	19:41 (PrRR3) 19:54 (PrRR3)	04:57 21:25	04:23 22:06	05:45 20:50	19:49 (PrRR3) 19:58 (PrRR3)	06:47 19:29	07:48 18:10	07:55 16:02
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	19:40 (PrRR3) 19:56 (PrRR3)	04:55 21:27	04:23 22:06	05:49 20:47	19:47 (PrRR3) 20:00 (PrRR3)	06:49 19:26	07:50 18:07	07:57 16:00
19	08:34 16:16	07:33 17:23	06:21 18:24	06:00 20:28	19:39 (PrRR3) 19:58 (PrRR3)	04:53 21:29	04:23 22:07	05:49 20:45	19:46 (PrRR3) 20:01 (PrRR3)	06:51 19:24	07:52 18:05	07:59 15:59
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	19:39 (PrRR3) 19:58 (PrRR3)	04:51 21:30	04:23 22:07	05:51 20:42	19:45 (PrRR3) 20:02 (PrRR3)	06:53 19:21	07:54 18:02	08:01 15:57
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	19:39 (PrRR3) 19:58 (PrRR3)	04:50 21:32	04:23 22:07	05:53 20:40	19:44 (PrRR3) 20:02 (PrRR3)	06:55 19:18	07:56 18:00	08:03 15:56
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	19:39 (PrRR3) 19:57 (PrRR3)	04:48 21:34	04:24 22:08	05:55 20:37	19:44 (PrRR3) 20:02 (PrRR3)	06:57 19:16	07:59 17:57	08:05 15:54
23	08:28 16:24	07:23 17:32	06:11 18:32	05:50 20:36	19:39 (PrRR3) 19:56 (PrRR3)	04:46 21:36	04:24 22:08	05:57 20:35	19:43 (PrRR3) 20:02 (PrRR3)	06:59 19:13	08:01 17:55	08:07 15:53
24	08:26 16:26	07:21 17:34	06:08 18:34	05:47 20:39	19:40 (PrRR3) 19:55 (PrRR3)	04:45 21:37	04:24 22:08	05:59 20:32	19:43 (PrRR3) 20:02 (PrRR3)	07:01 19:10	08:03 17:53	08:09 15:51
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	19:41 (PrRR3) 19:54 (PrRR3)	04:43 21:39	04:25 22:08	06:01 21:39	19:43 (PrRR3) 19:59 (PrRR3)	07:03 19:07	08:05 16:50	08:11 15:50
26	08:23 16:30	07:16 17:39	06:03 18:38	05:42 20:43	19:43 (PrRR3) 19:51 (PrRR3)	04:42 21:41	04:25 22:08	06:03 20:27	19:43 (PrRR3) 19:56 (PrRR3)	07:05 19:05	08:07 16:48	08:13 15:49
27	08:21 16:32	07:14 17:41	06:00 18:40	05:40 20:45	04:40 21:42	04:26 22:08	05:04 21:35	06:05 20:25	19:43 (PrRR3) 19:54 (PrRR3)	07:07 19:02	08:09 16:45	08:14 15:47
28	08:20 16:34	07:11 17:43	05:57 18:42	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	19:45 (PrRR3) 19:51 (PrRR3)	07:09 18:59	08:12 16:43	08:16 15:46
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:19	19:47 (PrRR3) 19:49 (PrRR3)	07:11 18:57	08:14 16:41	08:18 15:45
30	08:16 16:39		06:52 19:47	05:33 20:51	04:36 21:47	04:27 22:07	05:10 21:29	06:11 20:17		07:13 18:54	08:20 16:38	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14			07:18 16:36	
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Total, worst case				177				179				
Sun reduction				0,44				0,52				
Oper. time red.				1,00				1,00				
Wind dir. red.				1,00				1,00				
Total reduction				0,44				0,52				
Total, real				78				93				

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Vindeks - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (543)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Vinci - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (595)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:24	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:30	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:10	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:58	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:02	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:25	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:56	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:03	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Virsaiši - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (454)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:13 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:29 22:07	05:14 21:26	06:16 20:12	07:15 18:52	07:20 16:34	08:22 15:44
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:33 21:52	04:29 22:06	05:16 21:24	06:18 20:09	07:17 18:49	07:23 16:32	08:24 15:43
3	08:48 15:49	08:09 16:48	07:04 17:50	06:42 19:55	05:26 20:57	04:32 21:53	04:30 22:06	05:18 21:22	06:20 20:07	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:22 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:53	06:59 17:54	06:36 19:59	05:22 21:02	04:30 21:56	04:32 22:04	05:22 21:17	06:24 20:01	07:24 18:41	07:29 16:26	08:28 15:40
6	08:47 15:53	08:03 16:55	06:56 17:57	06:34 20:01	05:20 21:04	04:29 21:57	04:33 22:04	05:24 21:15	06:26 20:01	07:26 18:39	07:31 16:24	08:30 15:39
7	08:46 15:55	08:01 16:57	06:53 17:59	06:31 20:04	05:17 21:06	04:29 21:58	04:34 22:03	05:26 21:13	06:28 19:56	07:28 18:36	07:34 16:21	08:32 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:06	05:15 21:08	04:28 21:59	04:36 22:02	05:28 21:11	06:30 19:54	07:30 18:33	07:36 16:19	08:33 15:38
9	08:45 15:58	07:56 17:01	06:48 18:03	06:26 20:08	05:13 21:10	04:27 22:00	04:37 22:01	05:30 21:09	06:32 19:51	07:32 18:31	07:38 16:17	08:34 15:38
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:12	04:27 22:01	04:38 22:00	05:32 21:06	06:33 19:48	07:34 18:28	07:40 16:15	08:36 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:14	04:26 22:02	04:39 21:59	05:34 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:16	04:25 22:03	04:41 21:58	05:36 21:02	06:37 19:43	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:47 17:10	06:38 18:11	06:15 20:16	05:05 21:17	04:25 22:04	04:42 21:57	05:38 20:59	06:39 19:40	07:40 18:20	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:19	04:25 22:04	04:43 21:56	05:40 20:57	06:41 19:37	07:42 18:18	07:49 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:42 20:55	06:43 19:35	07:44 18:15	07:51 16:06	08:41 15:36
16	08:38 16:10	07:41 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:06	04:46 21:53	05:44 20:52	06:45 19:32	07:46 18:13	07:53 16:04	08:42 15:36
17	08:37 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:52	05:46 20:50	06:47 19:29	07:48 18:10	07:55 16:03	08:43 15:36
18	08:35 16:14	07:36 17:22	06:24 18:22	06:03 20:26	04:55 21:27	04:24 22:07	04:49 21:50	05:48 20:47	06:49 19:27	07:50 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:49	05:50 20:45	06:51 19:24	07:53 18:05	07:59 15:59	08:45 15:37
20	08:33 16:18	07:31 17:26	06:19 18:26	05:58 20:30	04:52 21:31	04:24 22:07	04:53 21:47	05:52 20:43	06:53 19:21	07:55 18:03	08:01 15:58	08:46 15:37
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:33	04:50 21:32	04:24 22:08	04:54 21:46	05:54 20:40	06:55 19:19	07:57 18:00	08:03 15:56	08:46 15:38
22	08:30 16:22	07:26 17:30	06:14 18:30	05:53 20:35	04:48 21:34	04:24 22:08	04:56 21:44	05:56 20:38	06:57 19:16	07:59 17:58	08:05 15:55	08:47 15:38
23	08:28 16:24	07:24 17:33	06:11 18:32	05:50 20:37	04:47 21:36	04:24 22:08	04:58 21:42	05:58 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:39
24	08:27 16:26	07:21 17:35	06:08 18:34	05:48 20:39	04:45 21:38	04:25 22:08	04:59 21:41	06:00 20:33	07:01 19:11	08:03 17:53	08:09 15:52	08:48 15:39
25	08:25 16:28	07:19 17:37	06:06 18:37	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:02 20:30	07:03 19:08	08:05 16:51	08:11 15:50	08:48 15:40
26	08:23 16:31	07:16 17:39	06:03 18:39	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:04 20:27	07:05 19:05	08:08 16:48	08:13 15:49	08:48 15:41
27	08:22 16:33	07:14 17:41	06:00 18:41	05:40 20:45	04:41 21:43	04:26 22:08	05:05 21:35	06:06 20:25	07:07 19:02	08:10 16:46	08:15 15:48	08:48 15:41
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:39 21:44	04:27 22:08	05:07 21:33	06:08 20:22	07:09 19:00	08:12 16:43	08:17 15:47	08:49 15:42
29	08:18 16:37		06:55 19:45	05:36 20:49	04:38 21:46	04:27 22:07	05:08 21:32	06:10 20:20	07:11 18:57	08:14 16:41	08:18 15:46	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:30	06:12 20:17	07:13 18:54	08:16 16:39	08:20 15:45	08:49 15:44
31	08:14 16:41		06:50 19:49		04:36 21:49		05:12 21:28	06:14 20:15		07:18 16:37		08:49 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Valodzites - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (582)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:24 21:15	06:25 19:59	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:02	05:26 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:27 21:11	06:29 19:53	07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:07	05:13 21:09	04:27 22:00	04:37 22:01	05:29 21:08	06:31 19:51	07:31 18:30	07:38 16:17	08:34 15:38
10	08:43 15:59	07:54 17:04	06:45 18:05	06:23 20:09	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06	06:33 19:48	07:33 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:02	04:40 21:58	05:35 21:01	06:37 19:43	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:37 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:56	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:13 20:18	05:03 21:19	04:24 22:04	04:43 21:55	05:39 20:57	06:41 19:37	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:54	06:43 19:34	07:44 18:15	07:50 16:06	08:41 15:36
16	08:37 16:10	07:40 17:17	06:29 18:18	06:07 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	07:52 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	07:57 16:01	08:44 15:36
19	08:34 16:16	07:33 17:24	06:21 18:24	06:00 20:28	04:53 21:29	04:24 22:07	04:51 21:48	05:49 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:30	04:24 22:07	04:52 21:47	05:51 20:42	06:53 19:21	07:54 18:02	08:01 15:57	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:07	04:54 21:45	05:53 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:07	04:56 21:44	05:55 20:37	06:57 19:16	07:59 17:58	08:05 15:54	08:46 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:36	04:47 21:36	04:24 22:08	04:58 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:38
24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:25 22:08	04:59 21:40	05:59 20:32	07:01 19:10	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 19:08	08:05 16:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:40
27	08:21 16:33	07:14 17:41	06:00 18:40	05:40 20:45	04:41 21:42	04:26 22:08	05:05 21:35	06:05 20:25	07:07 19:02	08:09 16:46	08:14 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:57 18:43	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	07:09 19:00	08:12 16:43	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:45	04:27 22:07	05:08 21:31	06:09 20:20	07:11 18:57	08:14 16:41	08:18 15:45	08:48 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 18:54	08:16 16:39	08:20 15:44	08:48 15:44
31	08:14 16:41		06:49 19:49		04:35 21:48		05:12 21:27	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Vejotnes - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (601)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
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12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Verdini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (445)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:47	08:13 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 21:50	04:29 22:06	05:15 21:26	06:16 20:12	07:16 18:52	07:20 16:35	08:22 15:44
2	08:48 15:49	08:11 16:46	07:06 17:48	06:45 19:53	05:29 20:55	04:34 21:51	04:30 22:06	05:17 21:24	06:18 20:09	07:18 18:49	07:23 16:33	08:23 15:43
3	08:48 15:50	08:09 16:49	07:04 17:50	06:42 19:55	05:27 20:57	04:33 21:53	04:31 22:05	05:19 21:21	06:20 20:07	07:20 18:47	07:25 16:30	08:25 15:42
4	08:47 15:51	08:07 16:51	07:01 17:53	06:39 19:57	05:25 20:59	04:32 21:54	04:32 22:05	05:20 21:19	06:22 20:04	07:22 18:44	07:27 16:28	08:27 15:42
5	08:47 15:53	08:05 16:53	06:59 17:55	06:37 19:59	05:22 21:01	04:31 21:55	04:33 22:04	05:22 21:17	06:24 20:02	07:24 18:41	07:29 16:26	08:28 15:41
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:02	05:20 21:03	04:30 21:56	04:34 22:03	05:24 21:15	06:26 20:00	07:26 18:39	07:31 16:24	08:30 15:40
7	08:46 15:56	08:01 16:57	06:54 17:59	06:31 20:04	05:18 21:05	04:29 21:58	04:35 22:03	05:26 21:13	06:28 19:56	07:28 18:36	07:33 16:22	08:31 15:40
8	08:45 15:57	07:58 17:00	06:51 18:01	06:29 20:06	05:16 21:07	04:29 21:59	04:36 22:02	05:28 21:11	06:30 19:54	07:30 18:34	07:36 16:20	08:33 15:39
9	08:44 15:59	07:56 17:02	06:48 18:03	06:26 20:08	05:14 21:09	04:28 22:00	04:37 22:01	05:30 21:08	06:32 19:51	07:32 18:31	07:38 16:18	08:34 15:38
10	08:44 16:00	07:54 17:04	06:46 18:05	06:24 20:10	05:12 21:11	04:27 22:01	04:39 22:00	05:32 21:06	06:34 19:48	07:34 18:28	07:40 16:16	08:35 15:38
11	08:43 16:02	07:52 17:06	06:43 18:08	06:21 20:12	05:10 21:13	04:27 22:02	04:40 21:59	05:34 21:04	06:36 19:46	07:36 18:26	07:42 16:14	08:37 15:38
12	08:42 16:04	07:50 17:09	06:40 18:10	06:18 20:14	05:08 21:15	04:26 22:02	04:41 21:58	05:36 21:02	06:38 19:43	07:38 18:23	07:44 16:12	08:38 15:37
13	08:41 16:05	07:47 17:11	06:38 18:12	06:16 20:16	05:06 21:17	04:26 22:03	04:43 21:57	05:38 20:59	06:40 19:40	07:40 18:21	07:46 16:10	08:39 15:37
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	05:04 21:19	04:25 22:04	04:44 21:55	05:40 20:57	06:42 19:38	07:42 18:18	07:48 16:08	08:40 15:37
15	08:39 16:09	07:43 17:15	06:33 18:16	06:11 20:20	05:02 21:21	04:25 22:05	04:46 21:54	05:42 20:55	06:44 19:35	07:44 18:16	07:51 16:07	08:41 15:37
16	08:38 16:11	07:41 17:18	06:30 18:18	06:08 20:22	05:00 21:23	04:25 22:05	04:47 21:53	05:44 20:52	06:46 19:32	07:46 18:13	07:53 16:05	08:42 15:37
17	08:36 16:13	07:38 17:20	06:27 18:20	06:06 20:24	04:58 21:25	04:25 22:06	04:49 21:51	05:46 20:50	06:48 19:30	07:48 18:11	07:55 16:03	08:43 15:37
18	08:35 16:15	07:36 17:22	06:25 18:22	06:03 20:26	04:56 21:27	04:25 22:06	04:50 21:50	05:48 20:47	06:50 19:27	07:51 18:08	07:57 16:01	08:44 15:37
19	08:34 16:17	07:34 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:25 22:07	04:52 21:48	05:50 20:45	06:52 19:24	07:53 18:06	07:59 16:00	08:45 15:38
20	08:32 16:19	07:31 17:26	06:19 18:26	05:58 20:31	04:53 21:30	04:25 22:07	04:53 21:47	05:52 20:43	06:54 19:21	07:55 18:03	08:01 15:58	08:45 15:38
21	08:31 16:21	07:29 17:29	06:17 18:28	05:55 20:33	04:51 21:32	04:25 22:07	04:55 21:45	05:54 20:40	06:56 19:19	07:57 18:01	08:03 15:57	08:46 15:38
22	08:30 16:23	07:26 17:31	06:14 18:31	05:53 20:35	04:49 21:34	04:25 22:08	04:57 21:44	05:56 20:38	06:58 19:16	07:59 17:58	08:05 15:55	08:46 15:39
23	08:28 16:25	07:24 17:33	06:11 18:33	05:51 20:37	04:48 21:36	04:25 22:08	04:58 21:42	05:58 20:35	07:00 19:13	08:01 17:56	08:07 15:54	08:47 15:39
24	08:26 16:27	07:21 17:35	06:09 18:35	05:48 20:39	04:46 21:38	04:25 22:08	05:00 21:40	06:00 20:33	07:02 19:11	08:03 17:53	08:09 15:52	08:47 15:40
25	08:25 16:29	07:19 17:37	06:06 18:37	05:46 20:41	04:44 21:39	04:26 22:08	05:02 21:39	06:02 20:30	07:04 19:08	07:05 16:51	08:11 15:51	08:48 15:41
26	08:23 16:31	07:16 17:40	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08	05:04 21:37	06:04 20:28	07:06 19:05	07:08 16:49	08:13 15:50	08:48 15:41
27	08:22 16:33	07:14 17:42	06:01 18:41	05:41 20:45	04:42 21:42	04:27 22:08	05:05 21:35	06:06 20:25	07:08 19:03	07:10 16:46	08:15 15:49	08:48 15:42
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:07	05:07 21:33	06:08 20:22	07:10 19:00	07:12 16:44	08:16 15:47	08:48 15:43
29	08:18 16:38		06:55 19:45	05:36 20:49	04:39 21:46	04:28 22:07	05:09 21:31	06:10 20:20	07:12 18:57	07:14 16:42	08:18 15:46	08:48 15:44
30	08:16 16:40		06:53 19:47	05:34 20:51	04:38 21:47	04:29 22:07	05:11 21:29	06:12 20:17	07:14 18:55	07:16 16:39	08:20 15:45	08:48 15:45
31	08:14 16:42		06:50 19:49		04:36 21:49		05:13 21:28	06:14 20:15		07:18 16:37		08:48 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Veris - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (492)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Vetras - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (539)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:46	08:12 16:43	07:09 17:45	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	13	19:28 (PrRR3) 19:41 (PrRR3)	07:15 18:51	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:45	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	6	19:31 (PrRR3) 19:37 (PrRR3)	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06			07:19 18:46	07:25 16:30	08:25 15:41
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:19 21:19	06:21 20:04			07:21 18:43	07:27 16:27	08:27 15:40
5	08:47 15:51	08:04 16:52	06:58 17:54	06:36 19:59	05:21 21:01	04:30 21:55	04:32 22:04	05:21 21:17	06:23 20:01			07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:54	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:57	04:33 22:03	05:23 21:15	06:25 19:59			07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:54	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56			07:27 18:36	07:33 16:21	08:31 15:38
8	08:45 15:56	07:58 16:59	06:50 18:01	06:28 20:05	05:15 21:07	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53			07:29 18:33	07:35 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:25 20:07	05:13 21:09	04:27 22:00	04:36 22:01	05:29 21:08	06:31 19:51			07:31 18:30	07:38 16:17	08:34 15:37
10	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:09	19:32 (PrRR3) 6 19:38 (PrRR3)	05:11 21:11	04:26 22:01	04:38 22:00	05:31 21:06			07:33 18:28	07:40 16:15	08:35 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	19:29 (PrRR3) 13 19:42 (PrRR3)	05:09 21:13	04:25 22:02	04:39 21:59	05:33 21:04			07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:49 17:08	06:40 18:09	06:18 20:14	19:26 (PrRR3) 17 19:43 (PrRR3)	05:07 21:15	04:25 22:03	04:40 21:58	05:35 21:01			07:37 18:43	07:44 16:11	08:38 15:36
13	08:41 16:04	07:47 17:10	06:37 18:11	06:15 20:16	19:25 (PrRR3) 20 19:45 (PrRR3)	05:05 21:17	04:25 22:03	04:42 21:57	05:37 20:59			07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:12 20:18	19:23 (PrRR3) 22 19:45 (PrRR3)	05:03 21:19	04:24 22:04	04:43 21:55	05:39 20:57			07:42 18:37 (Pr3a)	07:48 18:17	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:15	06:10 20:20	19:22 (PrRR3) 24 19:46 (PrRR3)	05:01 21:21	04:24 22:05	04:44 21:54	05:41 20:54	10	19:34 (PrRR3) 19:44 (PrRR3)	06:43 19:34	07:44 18:15	08:41 15:36
16	08:38 16:10	07:40 17:17	06:29 18:17	06:07 20:22	19:21 (PrRR3) 25 19:46 (PrRR3)	04:59 21:23	04:46 22:05	05:43 21:53	06:45 20:52	16	19:31 (PrRR3) 19:47 (PrRR3)	06:45 19:32	07:46 18:12	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	19:21 (PrRR3) 26 19:47 (PrRR3)	04:57 21:25	04:23 22:06	04:47 21:51	06:45 20:50	18	19:29 (PrRR3) 19:47 (PrRR3)	06:47 19:29	07:48 18:50 (Pr3a)	08:43 16:02
18	08:35 16:14	07:36 17:21	06:24 18:22	17:51 (Pr3a) 2 17:53 (Pr3a)	06:02 20:26	19:20 (PrRR3) 26 19:46 (PrRR3)	04:55 21:27	04:49 22:06	06:49 20:47	21	19:27 (PrRR3) 19:48 (PrRR3)	06:49 19:26	07:50 18:49 (Pr3a)	08:44 16:00
19	08:34 16:16	07:33 17:23	06:21 18:24	17:49 (Pr3a) 7 17:56 (Pr3a)	06:00 20:28	19:20 (PrRR3) 26 19:46 (PrRR3)	04:53 21:29	04:51 22:07	06:51 20:45	23	19:26 (PrRR3) 19:49 (PrRR3)	06:51 19:24	07:59 18:30 (Pr3a)	08:45 15:59
20	08:32 16:18	07:31 17:26	06:19 18:26	17:47 (Pr3a) 11 17:58 (Pr3a)	05:57 20:30	19:19 (PrRR3) 27 19:46 (PrRR3)	04:51 21:30	04:52 22:07	05:51 20:42	25	19:25 (PrRR3) 19:50 (PrRR3)	06:53 19:21	07:54 18:49 (Pr3a)	08:45 15:37
21	08:31 16:20	07:28 17:28	06:16 18:28	17:45 (Pr3a) 15 18:00 (Pr3a)	05:55 20:32	19:20 (PrRR3) 25 19:45 (PrRR3)	04:50 21:32	04:54 22:07	05:53 20:40	25	19:25 (PrRR3) 19:50 (PrRR3)	06:55 19:18	07:57 18:48 (Pr3a)	08:46 15:37
22	08:29 16:22	07:26 17:30	06:13 18:30	17:44 (Pr3a) 18 18:02 (Pr3a)	05:52 20:34	19:20 (PrRR3) 25 19:45 (PrRR3)	04:48 21:34	04:56 22:08	05:55 20:37	26	19:24 (PrRR3) 19:50 (PrRR3)	06:57 19:16	07:59 18:45 (Pr3a)	08:47 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	17:44 (Pr3a) 19 18:03 (Pr3a)	05:50 20:36	19:20 (PrRR3) 24 19:44 (PrRR3)	04:46 21:36	04:57 22:08	05:57 20:35	26	19:24 (PrRR3) 19:50 (PrRR3)	06:59 19:13	08:01 18:42 (Pr3a)	08:47 15:53
24	08:26 16:26	07:21 17:35	06:08 18:34	17:43 (Pr3a) 20 18:03 (Pr3a)	05:47 20:39	19:21 (PrRR3) 22 19:43 (PrRR3)	04:45 21:38	04:59 22:08	06:59 20:32	26	19:24 (PrRR3) 19:50 (PrRR3)	07:01 19:10	08:03 18:40 (Pr3a)	08:47 15:51
25	08:25 16:28	07:19 17:37	06:05 18:36	17:43 (Pr3a) 19 18:02 (Pr3a)	05:45 20:41	19:22 (PrRR3) 20 19:42 (PrRR3)	04:43 21:39	05:01 22:08	06:01 20:30	26	19:24 (PrRR3) 19:50 (PrRR3)	07:03 19:08	08:11 18:37 (Pr3a)	08:48 15:50
26	08:23 16:30	07:16 17:39	06:03 18:38	17:44 (Pr3a) 18 18:02 (Pr3a)	05:42 20:43	19:22 (PrRR3) 18 19:40 (PrRR3)	04:42 21:41	05:03 22:08	07:05 20:27	26	19:23 (PrRR3) 19:49 (PrRR3)	07:08 19:05	08:13 16:48	08:48 15:40
27	08:21 16:32	07:14 17:41	06:00 18:40	17:44 (Pr3a) 16 18:00 (Pr3a)	05:40 20:45	19:24 (PrRR3) 15 19:39 (PrRR3)	04:40 21:42	05:04 21:35	06:05 20:25	25	19:23 (PrRR3) 19:48 (PrRR3)	07:07 19:02	08:15 16:45	08:48 15:41
28	08:20 16:34	07:11 17:43	05:57 18:42	17:44 (Pr3a) 15 17:59 (Pr3a)	05:38 20:47	19:27 (PrRR3) 9 19:36 (PrRR3)	04:39 21:44	05:06 22:07	06:07 21:33	24	19:23 (PrRR3) 19:47 (PrRR3)	07:09 18:59	08:16 16:43	08:48 15:42
29	08:18 16:37		06:55 19:45	18:47 (Pr3a) 10 18:57 (Pr3a)	05:35 20:49	04:38 21:46	05:08 22:07	06:09 21:31	07:11 20:20	22	19:24 (PrRR3) 19:46 (PrRR3)	07:11 18:57	08:18 16:41	08:48 15:43
30	08:16 16:39		06:52 19:47		05:33	04:36	04:27	05:10	06:11		19:25 (PrRR3)	07:13	08:20	08:48
31	08:14 16:41		06:49 19:49		20:51	21:47	22:07	21:29	20:17	20	19:45 (PrRR3)	18:54	15:44	15:44
						04:35		05:12	06:13		19:26 (PrRR3)		07:18	08:48
						21:49		21:27	20:14	17	19:43 (PrRR3)		16:36	15:45
Potential sun hours	236	266	366	426	507	528	529	469	384		324	248	217	
Total, worst case			170	390				376	196					
Sun reduction			0,39	0,44				0,52	0,43					
Oper. time red.			1,00	1,00				1,00	1,00					
Wind dir. red.			1,00	1,00				1,00	1,00					
Total reduction			0,39	0,44				0,52	0,43					
Total, real			67	172				196	85					

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Veveru majas - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (460)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:49	08:13	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:46	19:51	20:53	21:50	22:07	21:26	20:12	18:52	16:34	15:43
2	08:48	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:23	08:24
	15:48	16:46	17:48	19:53	20:55	21:52	22:06	21:24	20:09	18:49	16:32	15:42
3	08:48	08:09	07:04	06:41	05:26	04:32	04:30	05:18	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:06	21:22	20:07	18:46	16:30	15:41
4	08:48	08:07	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:27	15:41
5	08:47	08:05	06:58	06:36	05:22	04:30	04:32	05:21	06:23	07:23	07:29	08:29
	15:52	16:52	17:54	19:59	21:02	21:56	22:04	21:17	20:01	18:41	16:25	15:40
6	08:47	08:03	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:04	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:01	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:34	08:32
	15:54	16:57	17:59	20:03	21:06	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:35	05:27	06:29	07:30	07:36	08:33
	15:56	16:59	18:01	20:05	21:08	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:45	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:32	07:38	08:34
	15:58	17:01	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:34	07:40	08:36
	15:59	17:03	18:05	20:10	21:12	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:50	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:38	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:18	22:04	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:49	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:56	20:57	19:37	18:18	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:51	08:41
	16:08	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:36
16	08:38	07:41	06:30	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:53	08:42
	16:10	17:17	18:18	20:22	21:23	22:06	21:53	20:52	19:32	18:12	16:04	15:36
17	08:37	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:27	18:07	16:01	15:36
19	08:34	07:33	06:22	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:24	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33	07:31	06:19	05:57	04:52	04:23	04:52	05:51	06:53	07:55	08:01	08:46
	16:18	17:26	18:26	20:30	21:31	22:07	21:47	20:43	19:21	18:02	15:57	15:37
21	08:31	07:29	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:14	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:58	15:54	15:38
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:27	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:35	18:34	20:39	21:38	22:08	21:41	20:33	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	17:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	17:48	15:49	15:40
27	08:22	07:14	06:00	05:40	04:40	04:26	05:04	06:05	07:07	08:09	08:15	08:49
	16:32	17:41	18:41	20:45	21:43	22:08	21:35	20:25	19:02	17:46	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:12	08:17	08:49
	16:35	17:43	18:43	20:47	21:44	22:08	21:34	20:22	19:00	17:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:08	21:32	20:20	18:57	17:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:49
	16:39		19:47	20:51	21:47	22:07	21:30	20:17	18:54	17:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:49
	16:41		19:49		21:49		21:28	20:15		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Zarini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (457)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:49 15:46	08:13 16:43	07:09 17:46	06:47 19:51	05:31 20:54	04:34 21:51	04:28 22:07	05:14 21:26	06:16 20:12	07:15 18:52	07:21 16:34	08:22 15:43
2	08:49 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:28 20:56	04:33 21:52	04:29 22:07	05:16 21:24	06:18 20:09	07:17 18:49	07:23 16:32	08:24 15:42
3	08:48 15:49	08:09 16:48	07:04 17:50	06:42 19:55	05:26 20:58	04:32 21:53	04:30 22:06	05:18 21:22	06:20 20:07	07:19 18:46	07:25 16:30	08:26 15:41
4	08:48 15:50	08:07 16:50	07:01 17:52	06:39 19:57	05:24 21:00	04:31 21:55	04:31 22:05	05:20 21:20	06:21 20:04	07:22 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:52	06:59 17:54	06:36 19:59	05:22 21:02	04:30 21:56	04:32 22:05	05:22 21:18	06:23 20:02	07:24 18:41	07:29 16:25	08:29 15:40
6	08:47 15:53	08:03 16:55	06:56 17:57	06:34 20:02	05:19 21:04	04:29 21:57	04:33 22:04	05:24 21:15	06:25 19:59	07:26 18:39	07:32 16:23	08:30 15:39
7	08:46 15:55	08:01 16:57	06:53 17:59	06:31 20:04	05:17 21:06	04:28 21:58	04:34 22:03	05:26 21:13	06:27 19:56	07:28 18:36	07:34 16:21	08:32 15:39
8	08:46 15:56	07:59 16:59	06:51 18:01	06:28 20:06	05:15 21:08	04:28 21:59	04:35 22:02	05:28 21:11	06:29 19:54	07:30 18:33	07:36 16:19	08:33 15:38
9	08:45 15:58	07:56 17:01	06:48 18:03	06:26 20:08	05:13 21:10	04:27 22:00	04:36 22:01	05:29 21:09	06:31 19:51	07:32 18:31	07:38 16:17	08:35 15:38
10	08:44 15:59	07:54 17:04	06:46 18:05	06:23 20:10	05:11 21:12	04:26 22:01	04:38 22:00	05:31 21:07	06:33 19:48	07:34 18:28	07:40 16:15	08:36 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:21 20:12	05:09 21:14	04:26 22:02	04:39 21:59	05:33 21:04	06:35 19:46	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:16	04:25 22:03	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	07:45 16:11	08:38 15:36
13	08:41 16:05	07:48 17:10	06:38 18:11	06:15 20:16	05:05 21:18	04:25 22:04	04:42 21:57	05:37 21:00	06:39 19:40	07:40 18:20	07:47 16:09	08:40 15:36
14	08:40 16:06	07:45 17:13	06:35 18:14	06:13 20:18	05:03 21:20	04:24 22:05	04:43 21:56	05:39 20:57	06:41 19:38	07:42 18:18	07:49 16:08	08:41 15:36
15	08:39 16:08	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:22	04:24 22:05	04:45 21:55	05:41 20:55	06:43 19:35	07:44 18:15	07:51 16:06	08:42 15:36
16	08:38 16:10	07:41 17:17	06:30 18:18	06:08 20:22	04:59 21:24	04:24 22:06	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:13	07:53 16:04	08:43 15:36
17	08:37 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:52	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:44 15:36
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19	08:34 16:16	07:34 17:24	06:22 18:24	06:00 20:29	04:53 21:29	04:23 22:07	04:51 21:49	05:49 20:45	06:51 19:24	07:53 18:05	07:59 15:59	08:45 15:37
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27	08:22 16:33	07:14 17:41	06:00 18:41	05:40 20:45	04:41 21:43	04:26 22:08	05:05 21:36	06:05 20:25	07:07 19:02	07:10 16:46	08:15 15:48	08:49 15:41
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31	08:15 16:41		06:50 19:49		04:35 21:49		05:12 21:28	06:14 20:15		07:18 16:36		08:49 15:45
Potential sun hours	235	266	366	426	508	528	529	469	385	324	248	216
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Zelmeni - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (593)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
3	08:48 15:49	08:08 16:48	07:03 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:05	05:18 21:21	06:19 20:06	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:06 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:04 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 15:40
6	08:46 15:53	08:02 16:55	06:56 17:56	06:33 20:01	05:19 21:03	04:29 21:56	04:33 22:03	05:24 21:15	06:25 20:01	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:58	06:31 20:03	05:17 21:05	04:28 21:58	04:34 22:02	05:25 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 15:39
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18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	07:57 16:01	08:44 15:36
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22	08:29 16:22	07:26 17:30	06:13 18:30	05:52 20:34	04:48 21:34	04:24 22:07	04:56 21:44	05:55 20:37	06:57 19:16	07:59 17:58	08:05 15:54	08:46 15:38
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24	08:26 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:37	04:24 22:08	04:59 21:40	05:59 20:32	07:01 19:10	08:03 17:53	08:09 15:52	08:47 15:39
25	08:25 16:28	07:19 17:37	06:05 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 19:08	08:05 16:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:38	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:40
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28	08:20 16:35	07:11 17:43	05:57 18:42	05:38 20:47	04:39 21:44	04:26 22:07	05:06 21:33	06:07 20:22	07:09 19:00	08:12 16:43	08:16 15:47	08:48 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:45	04:27 22:07	05:08 21:31	06:09 20:20	07:11 18:57	08:14 16:41	08:18 15:45	08:48 15:43
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31	08:14 16:41		06:49 19:49		04:35 21:48		05:12 21:27	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Zelta Dibens - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (579)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:06	05:14 21:25	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:10 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:51	04:29 22:06	05:16 21:23	06:17 20:09	07:17 18:49	07:22 16:32	08:23 15:42
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4	08:47 15:50	08:07 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
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29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 20:01	08:14 17:41	08:18 15:45	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:29	06:11 20:17	07:13 20:01	08:16 17:39	08:20 15:44	08:49 15:44
31	08:14 16:41		06:49 19:49		04:35 21:49		05:12 21:27	06:13 20:14	07:18 20:01	08:18 17:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Zemesbites - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (505)  
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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

	January	February	March	April	May	June
1	08:48	08:12	07:09	06:47	18:58 (PrRR3)	05:31
	15:46	16:43	17:45	19:51	25 19:23 (Pr25)	20:53
2	08:48	08:10	07:06	06:44	18:57 (PrRR3)	05:28
	15:47	16:45	17:48	19:53	27 19:24 (Pr25)	20:55
3	08:48	08:08	07:03	06:41	18:55 (PrRR3)	05:26
	15:49	16:48	17:50	19:55	31 19:26 (Pr25)	20:57
4	08:47	08:06	07:01	06:39	18:55 (PrRR3)	05:24
	15:50	16:50	17:52	19:57	32 19:27 (Pr25)	20:59
5	08:47	08:04	06:58	06:36	18:53 (PrRR3)	05:21
	15:51	16:52	17:54	19:59	34 19:27 (Pr25)	21:01
6	08:46	08:02	06:56	06:33	18:53 (PrRR3)	05:19
	15:53	16:54	17:56	20:01	34 19:27 (Pr25)	21:03
7	08:46	08:00	06:53	06:31	18:53 (PrRR3)	05:17
	15:54	16:57	17:58	20:03	32 19:25 (Pr25)	21:05
8	08:45	07:58	06:50	06:28	18:52 (PrRR3)	05:15
	15:56	16:59	18:01	20:05	32 19:24 (Pr25)	21:07
9	08:44	07:56	06:48	17:28 (Pr3a)	18:52 (PrRR3)	05:13
	15:58	17:01	18:03	6 17:34 (Pr3a)	31 19:23 (Pr25)	21:09
10	08:44	07:54	06:45	17:27 (Pr3a)	18:52 (PrRR3)	05:11
	15:59	17:03	18:05	10 17:37 (Pr3a)	28 19:20 (PrRR3)	21:11
11	08:43	07:52	06:43	17:25 (Pr3a)	18:53 (PrRR3)	05:09
	16:01	17:06	18:07	14 17:39 (Pr3a)	26 19:19 (PrRR3)	21:13
12	08:42	07:49	06:40	17:23 (Pr3a)	18:53 (PrRR3)	05:07
	16:03	17:08	18:09	17 17:40 (Pr3a)	25 19:18 (PrRR3)	21:15
13	08:41	07:47	06:37	17:23 (Pr3a)	18:54 (PrRR3)	05:05
	16:04	17:10	18:11	20 17:43 (Pr3a)	23 19:17 (PrRR3)	21:17
14	08:40	07:45	06:35	17:22 (Pr3a)	18:55 (PrRR3)	05:03
	16:06	17:12	18:13	21 17:43 (Pr3a)	20 19:15 (PrRR3)	21:19
15	08:39	07:43	06:32	17:22 (Pr3a)	18:56 (PrRR3)	05:01
	16:08	17:15	18:15	20 17:42 (Pr3a)	18 19:14 (PrRR3)	21:21
16	08:38	07:40	06:29	17:22 (Pr3a)	18:58 (PrRR3)	04:59
	16:10	17:17	18:17	20 17:42 (Pr3a)	13 19:11 (PrRR3)	21:23
17	08:36	07:38	06:27	17:22 (Pr3a)	19:03 (PrRR3)	04:57
	16:12	17:19	18:20	19 17:41 (Pr3a)	3 19:06 (PrRR3)	21:25
18	08:35	07:36	06:24	17:23 (Pr3a)	04:55	04:23
	16:14	17:21	18:22	17 17:40 (Pr3a)	21:27	22:06
19	08:34	07:33	06:21	17:24 (Pr3a)	04:53	04:23
	16:16	17:23	18:24	15 17:39 (Pr3a)	21:29	22:07
20	08:32	07:31	06:19	17:26 (Pr3a)	04:51	04:23
	16:18	17:26	18:26	10 17:36 (Pr3a)	21:30	22:07
21	08:31	07:28	06:16	05:55	04:50	04:23
	16:20	17:28	18:28	20:32	21:32	22:07
22	08:29	07:26	06:13	05:52	04:48	04:24
	16:22	17:30	18:30	20:34	21:34	22:08
23	08:28	07:24	06:11	05:50	04:46	04:24
	16:24	17:32	18:32	20:36	21:36	22:08
24	08:26	07:21	06:08	05:47	04:45	04:24
	16:26	17:35	18:34	20:39	21:38	22:08
25	08:25	07:19	06:05	05:45	04:43	04:25
	16:28	17:37	18:36	20:41	21:39	22:08
26	08:23	07:16	06:03	05:42	04:42	04:25
	16:30	17:39	18:38	20:43	21:41	22:08
27	08:21	07:14	06:00	05:40	04:40	04:26
	16:32	17:41	18:40	20:45	21:43	22:08
28	08:20	07:11	05:57	05:38	04:39	04:26
	16:34	17:43	18:42	20:47	21:44	22:07
29	08:18		06:55	05:35	04:38	04:27
	16:37		19:45	20:49	21:46	22:07
30	08:16		06:52	19:03 (PrRR3)	05:33	04:27
	16:39		19:47	15 19:18 (Pr25)	20:51	21:47
31	08:14		06:49	19:00 (PrRR3)		04:35
	16:41		19:49	20 19:20 (Pr25)	21:49	
Potential sun hours	236	266	366	426	507	528
Total, worst case			224	434		
Sun reduction			0,39	0,44		
Oper. time red.			1,00	1,00		
Wind dir. red.			1,00	1,00		
Total reduction			0,39	0,44		
Total, real			88	192		

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

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

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Zemesbites - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (505)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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

	July	August	September	October	November	December
1	04:28 22:06	05:14 21:25	06:15 20:12	18:52 (PrRR3) 19:18 (PrRR3)	07:15 18:03 (Pr3a)	07:20 16:34
2	04:29 22:06	05:16 21:23	06:17 20:09	18:51 (PrRR3) 19:19 (PrRR3)	07:17 18:19 (Pr3a)	07:22 16:32
3	04:30 22:05	05:18 21:21	06:19 20:06	18:50 (PrRR3) 19:21 (Pr25)	07:19 18:16 (Pr3a)	07:25 16:30
4	04:31 22:05	05:19 21:19	06:21 20:04	18:50 (PrRR3) 19:22 (Pr25)	07:21 18:13 (Pr3a)	07:27 16:27
5	04:32 22:04	05:21 21:17	06:23 20:01	18:49 (PrRR3) 19:21 (Pr25)	07:23 18:10 (Pr3a)	07:29 16:25
6	04:33 22:03	05:23 21:15	06:25 19:59	18:48 (PrRR3) 19:22 (Pr25)	07:25 18:38	07:31 16:23
7	04:34 22:03	05:25 21:13	06:27 19:56	18:48 (PrRR3) 19:22 (Pr25)	07:27 18:36	07:33 16:21
8	04:35 22:02	05:27 21:11	06:29 19:53	18:49 (PrRR3) 19:22 (Pr25)	07:29 18:33	07:35 16:19
9	04:36 22:01	05:29 21:08	06:31 19:51	18:49 (PrRR3) 19:20 (Pr25)	07:31 18:30	07:38 16:17
10	04:38 22:00	05:31 21:06	06:33 19:48	18:50 (PrRR3) 19:18 (Pr25)	07:33 18:28	07:40 16:15
11	04:39 21:59	05:33 21:04	06:35 19:45	18:51 (PrRR3) 19:15 (Pr25)	07:36 18:25	07:42 16:13
12	04:40 21:58	05:35 21:02	06:37 19:43	18:52 (PrRR3) 19:13 (Pr25)	07:38 18:23	07:44 16:11
13	04:42 21:57	05:37 20:59	06:39 19:40	18:54 (PrRR3) 19:10 (Pr25)	07:40 18:20	07:46 16:09
14	04:43 21:55	05:39 20:57	06:41 19:37	18:58 (PrRR3) 19:03 (PrRR3)	07:42 18:17	07:48 16:07
15	04:44 21:54	05:41 20:54	06:43 19:34	07:44 18:15	07:50 16:06	08:41 15:36
16	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	07:53 16:04	08:42 15:36
17	04:47 21:51	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 15:36
18	04:49 21:50	05:47 20:47	06:49 19:26	07:50 18:07	07:57 16:00	08:44 15:36
19	04:51 21:49	05:49 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 15:36
20	04:52 21:47	05:51 20:42	06:53 19:21	07:54 18:02	08:01 15:57	08:45 15:37
21	04:54 21:45	05:53 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 15:37
22	04:56 21:44	05:55 20:37	06:57 19:16	07:59 17:57	08:05 15:54	08:47 15:38
23	04:57 21:42	05:57 20:35	06:59 19:13	18:10 (Pr3a) 18:19 (Pr3a)	08:01 17:55	08:47 15:38
24	04:59 21:40	05:59 20:32	07:01 19:10	18:08 (Pr3a) 18:21 (Pr3a)	08:03 17:53	08:47 15:39
25	05:01 21:39	06:01 20:30	07:03 19:08	18:06 (Pr3a) 18:22 (Pr3a)	07:05 16:50	08:11 15:50
26	05:03 21:37	06:03 20:27	19:04 (PrRR3) 19:09 (PrRR3)	07:05 18:04 (Pr3a)	07:07 16:48	08:13 15:49
27	05:04 21:35	06:05 20:25	19:00 (PrRR3) 19:13 (PrRR3)	07:07 19:02	18:03 (Pr3a) 18:23 (Pr3a)	07:09 16:45
28	05:06 21:33	06:07 20:22	18:57 (PrRR3) 19:15 (PrRR3)	07:09 18:59	18:03 (Pr3a) 18:23 (Pr3a)	07:12 16:43
29	05:08 21:31	06:09 20:20	18:55 (PrRR3) 19:16 (PrRR3)	07:11 18:57	18:02 (Pr3a) 18:23 (Pr3a)	07:14 16:41
30	05:10 21:29	06:11 20:17	18:54 (PrRR3) 19:17 (PrRR3)	07:13 18:54	18:02 (Pr3a) 18:22 (Pr3a)	07:16 16:38
31	05:12 21:27	06:13 20:14	18:53 (PrRR3) 19:18 (PrRR3)	07:18 16:36	07:18 16:36	08:48 15:45
Potential sun hours	529	469	384	324	248	217
Total, worst case		105	513	57		
Sun reduction		0,52	0,43	0,29		
Oper. time red.		1,00	1,00	1,00		
Wind dir. red.		1,00	1,00	1,00		
Total reduction		0,52	0,43	0,29		
Total, real		55	221	17		

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Zemnieka seta - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (453)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48 15:47	08:12 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:29 22:07	05:14 21:26	06:15 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:29 20:55	04:33 21:52	04:29 22:06	05:16 21:24	06:17 20:09	07:17 18:49	07:23 16:32	08:24 15:43
3	08:48 15:49	08:09 16:48	07:04 17:50	06:42 19:55	05:26 20:57	04:32 21:53	04:30 22:06	05:18 21:21	06:19 20:07	07:19 18:46	07:25 16:30	08:25 15:42
4	08:47 15:50	08:07 16:50	07:01 17:52	06:39 19:57	05:24 20:59	04:31 21:54	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:52	06:58 17:54	06:36 19:59	05:22 21:01	04:30 21:55	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:26	08:28 15:40
6	08:46 15:53	08:03 16:55	06:56 17:56	06:34 20:01	05:20 21:03	04:29 21:57	04:33 22:04	05:24 21:15	06:25 20:01	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:55	08:00 16:57	06:53 17:59	06:31 20:03	05:17 21:05	04:29 21:58	04:34 22:03	05:26 21:13	06:27 20:01	07:27 18:36	07:33 16:21	08:31 15:39
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:05	05:15 21:07	04:28 21:59	04:35 22:02	05:28 21:11	06:29 20:01	07:30 18:33	07:36 16:19	08:33 15:38
9	08:44 15:58	07:56 17:01	06:48 18:03	06:26 20:08	05:13 21:09	04:27 22:00	04:37 22:01	05:30 21:08	06:31 20:01	07:32 18:31	07:38 16:17	08:34 15:38
10	08:44 16:00	07:54 17:04	06:45 18:05	06:23 20:10	05:11 21:11	04:26 22:01	04:38 22:00	05:32 21:06	06:33 20:01	07:34 18:28	07:40 16:15	08:36 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:13	04:26 22:02	04:39 21:59	05:34 21:04	06:35 20:01	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:15	04:25 22:03	04:40 21:58	05:36 21:02	06:37 20:01	07:38 18:23	07:44 16:11	08:38 15:37
13	08:41 16:05	07:47 17:10	06:38 18:11	06:15 20:16	05:05 21:17	04:25 22:03	04:42 21:57	05:37 20:59	06:39 20:01	07:40 18:20	07:46 16:10	08:39 15:36
14	08:40 16:07	07:45 17:13	06:35 18:13	06:13 20:18	05:03 21:19	04:25 22:04	04:43 21:55	05:39 20:57	06:41 20:01	07:42 18:18	07:48 16:08	08:40 15:36
15	08:39 16:08	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:24 22:05	04:45 21:54	05:41 20:55	06:43 20:01	07:44 18:15	07:51 16:06	08:41 15:36
16	08:38 16:10	07:40 17:17	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:05	04:46 21:53	05:43 20:52	06:45 20:01	07:46 18:13	07:53 16:04	08:42 15:36
17	08:36 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06	04:48 21:51	05:45 20:50	06:47 20:01	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:22	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:06	04:49 21:50	05:47 20:47	06:49 20:01	07:50 18:08	07:57 16:01	08:44 15:37
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	04:54 21:29	04:24 22:07	04:51 21:49	05:49 20:45	06:51 20:01	07:52 18:05	07:59 15:59	08:45 15:37
20	08:32 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:31	04:24 22:07	04:53 21:47	05:51 20:42	06:53 20:01	07:55 18:03	08:01 15:58	08:45 15:37
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:32	04:50 21:32	04:24 22:08	04:54 21:46	05:53 20:40	06:55 20:01	07:57 18:00	08:03 15:56	08:46 15:37
22	08:30 16:22	07:26 17:30	06:14 18:30	05:52 20:35	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:37	06:57 20:01	07:59 17:58	08:05 15:55	08:47 15:38
23	08:28 16:24	07:24 17:33	06:11 18:32	05:50 20:37	04:47 21:36	04:24 22:08	04:58 21:42	05:57 20:35	06:59 20:01	08:01 17:55	08:07 15:53	08:47 15:38
24	08:27 16:26	07:21 17:35	06:08 18:34	05:48 20:39	04:45 21:38	04:25 22:08	04:59 21:41	05:59 20:32	07:01 20:01	08:03 17:53	08:09 15:52	08:48 15:39
25	08:25 16:28	07:19 17:37	06:06 18:36	05:45 20:41	04:44 21:39	04:25 22:08	05:01 21:39	06:01 20:30	07:03 20:01	08:05 17:50	08:11 15:50	08:48 15:40
26	08:23 16:30	07:16 17:39	06:03 18:39	05:43 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 20:01	08:07 17:48	08:13 15:49	08:48 15:40
27	08:22 16:33	07:14 17:41	06:00 18:41	05:40 20:45	04:41 21:43	04:26 22:08	05:05 21:35	06:05 20:25	07:07 20:01	08:09 17:46	08:15 15:48	08:48 15:41
28	08:20 16:35	07:11 17:43	05:58 18:43	05:38 20:47	04:39 21:44	04:26 22:08	05:07 21:33	06:07 20:22	07:09 20:01	08:12 17:43	08:16 15:47	08:49 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07	05:08 21:31	06:09 20:20	07:11 20:01	08:14 17:41	08:18 15:46	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07	05:10 21:30	06:11 20:17	07:13 20:01	08:16 17:39	08:20 15:44	08:49 15:44
31	08:14 16:41		06:50 19:49		04:36 21:49		05:12 21:28	06:13 20:14		07:18 16:36		08:48 15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Flickering\_Vestas\_V162\_Prikuli\_A

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Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
15.07.2025 14:55/4.1.254

Calculation: Flickering\_Vestas\_V162-Prikuli\_A Shadow receptor: Zirneklis - Shadow Receptor: 1,0 x 1,0 Azimuth: 3,1° Slope: 90,0° (549)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []  
Jan. Feb. Mar. Apr. May Jun. Jul. Aug. Sep. Oct. Nov. Dec.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

		January	February	March	April	May	June	July	August	September	October	November	December					
1	08:48	08:12		07:09		16:31 (PrRR3)	06:47	05:31	04:34	04:28	05:14	06:15		07:15	17:22 (PrRR3)	07:20	08:22	
	15:46	16:43		17:45	30	17:01 (PrRR3)	19:51	20:53	21:50	22:07	21:25	20:12		18:51	23	18:14 (Pr25)	16:34	15:43
2	08:48	08:10		07:06		16:30 (PrRR3)	06:44	05:28	04:33	04:29	05:16	06:17		07:17		17:16 (PrRR3)	07:22	08:23
	15:47	16:45		17:48	31	17:01 (PrRR3)	19:53	20:55	21:52	22:06	21:23	20:09		18:49	35	18:14 (Pr25)	16:32	15:42
3	08:48	08:09		07:03		16:30 (PrRR3)	06:41	05:26	04:32	04:30	05:18	06:19		07:19		17:13 (PrRR3)	07:25	08:25
	15:49	16:48		17:50	30	17:00 (PrRR3)	19:55	20:57	21:53	22:06	21:21	20:07		18:46	39	18:13 (Pr25)	16:30	15:41
4	08:47	08:07		07:01		16:30 (PrRR3)	06:39	05:24	04:31	04:31	05:19	06:21		07:21		17:11 (PrRR3)	07:27	08:27
	15:50	16:50		17:52	31	17:01 (PrRR3)	19:57	20:59	21:54	22:05	21:19	20:04		18:43	42	18:13 (Pr25)	16:27	15:40
5	08:47	08:04		06:58		16:30 (PrRR3)	06:36	05:21	04:30	04:32	05:21	06:23		07:23		17:09 (PrRR3)	07:29	08:28
	15:51	16:52		17:54	32	17:25 (Pr25)	19:59	21:01	21:55	22:04	21:17	20:01		18:41	42	18:10 (Pr25)	16:25	15:40
6	08:46	08:02		06:56		16:31 (PrRR3)	06:33	05:19	04:29	04:33	05:22	06:25		07:25		17:08 (PrRR3)	07:31	08:30
	15:53	16:54		17:56	37	17:28 (Pr25)	20:01	21:03	21:57	22:04	21:15	19:59		18:38	40	18:07 (Pr25)	16:23	15:39
7	08:46	08:00		06:53		16:31 (PrRR3)	06:31	05:17	04:28	04:34	05:25	06:27		07:27		17:06 (PrRR3)	07:33	08:31
	15:54	16:57		17:58	40	17:30 (Pr25)	20:03	21:05	21:58	22:03	21:13	19:56		18:36	40	18:05 (Pr25)	16:21	15:38
8	08:45	07:58		06:50		16:31 (PrRR3)	06:28	05:15	04:27	04:35	05:27	06:29		07:29		17:05 (PrRR3)	07:35	08:33
	15:56	16:59		18:01	42	17:32 (Pr25)	20:05	21:07	21:59	22:02	21:11	19:53		18:33	36	18:02 (Pr25)	16:19	15:38
9	08:44	07:56		06:48		16:32 (PrRR3)	06:25	05:13	04:27	04:36	05:29	06:31		07:31		17:05 (PrRR3)	07:38	08:34
	15:58	17:01		18:03	42	17:34 (Pr25)	20:07	21:09	22:00	22:01	21:08	19:51		18:30	30	17:35 (PrRR3)	16:17	15:37
10	08:44	07:54		06:45		16:34 (PrRR3)	06:23	05:11	04:26	04:37	05:31	06:33		07:33		17:04 (PrRR3)	07:40	08:35
	15:59	17:03		18:05	40	17:35 (Pr25)	20:09	21:11	22:01	22:00	21:06	19:48		18:28	31	17:35 (PrRR3)	16:15	15:37
11	08:43	07:52		16:28 (Pr3a)		06:43	16:36 (PrRR3)	06:20	05:09	04:25	04:39	05:33		07:36		17:05 (PrRR3)	07:42	08:37
	16:01	17:06	5	16:33 (Pr3a)	18:07	37	17:35 (Pr25)	20:12	21:13	22:02	21:59	21:04		19:45		17:35 (PrRR3)	16:13	15:37
12	08:42	07:49		16:26 (Pr3a)	06:40		16:39 (PrRR3)	06:18	05:07	04:25	04:40	05:35		07				

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Zvaigznites - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (459)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:49	08:13	07:09	06:47	05:31	04:34	04:28	05:14	06:16	07:15	07:21	08:22
	15:46	16:43	17:46	19:51	20:54	21:51	22:07	21:26	20:12	18:52	16:34	15:43
2	08:49	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:18	07:17	07:23	08:24
	15:48	16:46	17:48	19:53	20:56	21:52	22:07	21:24	20:10	18:49	16:32	15:42
3	08:48	08:09	07:04	06:42	05:26	04:32	04:30	05:18	06:20	07:20	07:25	08:26
	15:49	16:48	17:50	19:55	20:58	21:53	22:06	21:22	20:07	18:46	16:30	15:41
4	08:48	08:07	07:01	06:39	05:24	04:31	04:31	05:20	06:22	07:22	07:27	08:27
	15:50	16:50	17:52	19:57	21:00	21:55	22:05	21:20	20:04	18:44	16:28	15:41
5	08:47	08:05	06:59	06:36	05:22	04:30	04:32	05:22	06:24	07:24	07:29	08:29
	15:52	16:52	17:54	19:59	21:02	21:56	22:05	21:18	20:02	18:41	16:26	15:40
6	08:47	08:03	06:56	06:34	05:19	04:29	04:33	05:24	06:26	07:26	07:32	08:30
	15:53	16:55	17:57	20:02	21:04	21:57	22:04	21:15	19:59	18:39	16:23	15:39
7	08:46	08:01	06:53	06:31	05:17	04:28	04:34	05:26	06:28	07:28	07:34	08:32
	15:55	16:57	17:59	20:04	21:06	21:58	22:03	21:13	19:56	18:36	16:21	15:39
8	08:46	07:59	06:51	06:28	05:15	04:28	04:35	05:28	06:29	07:30	07:36	08:33
	15:56	16:59	18:01	20:06	21:08	21:59	22:02	21:11	19:54	18:33	16:19	15:38
9	08:45	07:56	06:48	06:26	05:13	04:27	04:36	05:30	06:31	07:32	07:38	08:35
	15:58	17:01	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:31	16:17	15:38
10	08:44	07:54	06:46	06:23	05:11	04:26	04:38	05:31	06:33	07:34	07:40	08:36
	15:59	17:04	18:05	20:10	21:12	22:01	22:00	21:07	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:21	05:09	04:26	04:39	05:33	06:35	07:36	07:42	08:37
	16:01	17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:46	18:25	16:13	15:37
12	08:42	07:50	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	07:45	08:38
	16:03	17:08	18:09	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:11	15:37
13	08:41	07:48	06:38	06:15	05:05	04:25	04:42	05:37	06:39	07:40	07:47	08:40
	16:05	17:10	18:11	20:16	21:18	22:04	21:57	21:00	19:40	18:20	16:10	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	07:49	08:41
	16:06	17:13	18:14	20:18	21:20	22:05	21:56	20:57	19:38	18:18	16:08	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:45	05:41	06:43	07:44	07:51	08:42
	16:08	17:15	18:16	20:20	21:22	22:05	21:55	20:55	19:35	18:15	16:06	15:36
16	08:38	07:41	06:30	06:08	04:59	04:24	04:46	05:43	06:45	07:46	07:53	08:43
	16:10	17:17	18:18	20:22	21:24	22:06	21:53	20:53	19:32	18:13	16:04	15:36
17	08:37	07:38	06:27	06:05	04:57	04:24	04:48	05:45	06:47	07:48	07:55	08:44
	16:12	17:19	18:20	20:24	21:25	22:07	21:52	20:50	19:29	18:10	16:02	15:36
18	08:36	07:36	06:24	06:02	04:55	04:24	04:49	05:47	06:49	07:51	07:57	08:44
	16:14	17:22	18:22	20:27	21:27	22:07	21:51	20:48	19:27	18:08	16:01	15:36
19	08:34	07:34	06:22	06:00	04:53	04:23	04:51	05:49	06:51	07:53	07:59	08:45
	16:16	17:24	18:24	20:29	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:37
20	08:33	07:31	06:19	05:57	04:52	04:24	04:52	05:51	06:53	07:55	08:01	08:46
	16:18	17:26	18:26	20:31	21:31	22:08	21:48	20:43	19:21	18:03	15:57	15:37
21	08:31	07:29	06:16	05:55	04:50	04:24	04:54	05:53	06:55	07:57	08:03	08:47
	16:20	17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:19	18:00	15:56	15:37
22	08:30	07:26	06:14	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:35	21:35	22:08	21:44	20:38	19:16	17:58	15:54	15:38
23	08:28	07:24	06:11	05:50	04:47	04:24	04:57	05:57	06:59	08:01	08:07	08:48
	16:24	17:33	18:32	20:37	21:36	22:08	21:43	20:35	19:13	17:55	15:53	15:38
24	08:27	07:21	06:08	05:48	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
	16:26	17:35	18:35	20:39	21:38	22:08	21:41	20:33	19:11	17:53	15:52	15:39
25	08:25	07:19	06:06	05:45	04:44	04:25	05:01	06:02	07:03	08:06	08:11	08:48
	16:28	17:37	18:37	20:41	21:40	22:08	21:39	20:30	19:08	17:50	15:50	15:40
26	08:24	07:16	06:03	05:43	04:42	04:25	05:03	06:04	07:05	08:08	08:13	08:49
	16:30	17:39	18:39	20:43	21:41	22:08	21:37	20:28	19:05	17:48	15:49	15:40
27	08:22	07:14	06:00	05:40	04:41	04:26	05:05	06:06	07:07	08:10	08:15	08:49
	16:33	17:41	18:41	20:45	21:43	22:08	21:36	20:25	19:03	17:46	15:48	15:41
28	08:20	07:11	05:58	05:38	04:39	04:26	05:06	06:08	07:09	08:12	08:17	08:49
	16:35	17:44	18:43	20:47	21:45	22:08	21:34	20:23	19:00	17:43	15:47	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:10	07:11	08:14	08:19	08:49
	16:37		19:45	20:49	21:46	22:08	21:32	20:20	18:57	17:41	15:45	15:43
30	08:17		06:52	05:33	04:37	04:28	05:10	06:12	07:13	08:16	08:21	08:49
	16:39		19:47	20:51	21:48	22:07	21:30	20:17	18:54	17:39	15:44	15:44
31	08:15		06:50		04:35		05:12	06:14		07:19		08:49
	16:41		19:49		21:49		21:28	20:15		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	385	324	248	216
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Zagiš i - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (534)  
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Abolini - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (537)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Ciekuri - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (433)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:13	07:09	06:47	05:31	04:35	04:29	05:14	06:16	07:16	07:21	08:22
	15:47	16:44	17:46	19:51	20:53	21:50	22:07	21:26	20:12	18:52	16:35	15:44
2	08:48	08:11	07:06	06:44	05:29	04:34	04:30	05:16	06:18	07:18	07:23	08:24
	15:48	16:46	17:48	19:53	20:55	21:52	22:06	21:24	20:10	18:49	16:32	15:43
3	08:48	08:09	07:04	06:42	05:27	04:33	04:31	05:18	06:20	07:20	07:25	08:25
	15:50	16:48	17:50	19:55	20:57	21:53	22:06	21:22	20:07	18:47	16:30	15:42
4	08:48	08:07	07:01	06:39	05:24	04:32	04:32	05:20	06:22	07:22	07:27	08:27
	15:51	16:51	17:52	19:57	21:00	21:54	22:05	21:20	20:04	18:44	16:28	15:41
5	08:47	08:05	06:59	06:37	05:22	04:31	04:33	05:22	06:24	07:24	07:29	08:29
	15:52	16:53	17:55	19:59	21:02	21:56	22:04	21:17	20:02	18:41	16:26	15:40
6	08:47	08:03	06:56	06:34	05:20	04:30	04:34	05:24	06:26	07:26	07:31	08:30
	15:54	16:55	17:57	20:02	21:04	21:57	22:04	21:15	19:59	18:39	16:24	15:40
7	08:46	08:01	06:54	06:31	05:18	04:29	04:35	05:26	06:28	07:28	07:34	08:32
	15:55	16:57	17:59	20:04	21:06	21:58	22:03	21:13	19:56	18:36	16:22	15:39
8	08:45	07:59	06:51	06:29	05:16	04:28	04:36	05:28	06:30	07:30	07:36	08:33
	15:57	16:59	18:01	20:06	21:08	21:59	22:02	21:11	19:54	18:33	16:20	15:39
9	08:45	07:56	06:48	06:26	05:13	04:27	04:37	05:30	06:32	07:32	07:38	08:34
	15:58	17:02	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:31	16:18	15:38
10	08:44	07:54	06:46	06:23	05:11	04:27	04:38	05:32	06:34	07:34	07:40	08:36
	16:00	17:04	18:05	20:10	21:12	22:01	22:00	21:06	19:48	18:28	16:16	15:38
11	08:43	07:52	06:43	06:21	05:09	04:26	04:40	05:34	06:36	07:36	07:42	08:37
	16:02	17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:46	18:26	16:14	15:37
12	08:42	07:50	06:40	06:18	05:07	04:26	04:41	05:36	06:38	07:38	07:44	08:38
	16:03	17:08	18:10	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:12	15:37
13	08:41	07:48	06:38	06:16	05:05	04:25	04:42	05:38	06:40	07:40	07:46	08:39
	16:05	17:11	18:12	20:16	21:18	22:04	21:57	20:59	19:40	18:21	16:10	15:37
14	08:40	07:45	06:35	06:13	05:03	04:25	04:44	05:40	06:42	07:42	07:49	08:40
	16:07	17:13	18:14	20:18	21:19	22:04	21:56	20:57	19:38	18:18	16:08	15:37
15	08:39	07:43	06:32	06:10	05:01	04:25	04:45	05:42	06:44	07:44	07:51	08:41
	16:09	17:15	18:16	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:37
16	08:38	07:41	06:30	06:08	04:59	04:24	04:47	05:44	06:46	07:46	07:53	08:42
	16:11	17:17	18:18	20:22	21:23	22:06	21:53	20:52	19:32	18:13	16:05	15:37
17	08:37	07:38	06:27	06:05	04:58	04:24	04:48	05:46	06:48	07:48	07:55	08:43
	16:13	17:20	18:20	20:24	21:25	22:06	21:52	20:50	19:30	18:10	16:03	15:37
18	08:35	07:36	06:25	06:03	04:56	04:24	04:50	05:48	06:50	07:51	07:57	08:44
	16:14	17:22	18:22	20:26	21:27	22:07	21:50	20:48	19:27	18:08	16:01	15:37
19	08:34	07:34	06:22	06:00	04:54	04:24	04:51	05:50	06:52	07:53	07:59	08:45
	16:16	17:24	18:24	20:29	21:29	22:07	21:49	20:45	19:24	18:05	16:00	15:37
20	08:33	07:31	06:19	05:58	04:52	04:24	04:53	05:52	06:54	07:55	08:01	08:46
	16:18	17:26	18:26	20:31	21:31	22:07	21:47	20:43	19:21	18:03	15:58	15:37
21	08:31	07:29	06:17	05:55	04:50	04:24	04:55	05:54	06:55	07:57	08:03	08:46
	16:20	17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:19	18:00	15:56	15:38
22	08:30	07:26	06:14	05:53	04:49	04:24	04:56	05:56	06:57	07:59	08:05	08:47
	16:22	17:31	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:58	15:55	15:38
23	08:28	07:24	06:11	05:50	04:47	04:25	04:58	05:58	06:59	08:01	08:07	08:47
	16:25	17:33	18:33	20:37	21:36	22:08	21:42	20:35	19:13	17:56	15:53	15:39
24	08:27	07:21	06:09	05:48	04:46	04:25	05:00	06:00	07:01	08:03	08:09	08:48
	16:27	17:35	18:35	20:39	21:38	22:08	21:41	20:33	19:11	17:53	15:52	15:39
25	08:25	07:19	06:06	05:45	04:44	04:25	05:02	06:02	07:03	08:05	08:11	08:48
	16:29	17:37	18:37	20:41	21:39	22:08	21:39	20:30	19:08	17:51	15:51	15:40
26	08:23	07:16	06:03	05:43	04:43	04:26	05:03	06:04	07:05	08:08	08:13	08:48
	16:31	17:39	18:39	20:43	21:41	22:08	21:37	20:28	19:05	17:48	15:49	15:41
27	08:22	07:14	06:00	05:41	04:41	04:26	05:05	06:06	07:07	08:10	08:15	08:49
	16:33	17:42	18:41	20:45	21:43	22:08	21:35	20:25	19:03	17:46	15:48	15:42
28	08:20	07:11	05:58	05:38	04:40	04:27	05:07	06:08	07:09	08:12	08:17	08:49
	16:35	17:44	18:43	20:47	21:44	22:08	21:34	20:22	19:00	17:44	15:47	15:43
29	08:18		06:55	05:36	04:38	04:28	05:09	06:10	07:11	08:14	08:18	08:49
	16:37		19:45	20:49	21:46	22:07	21:32	20:20	18:57	17:41	15:46	15:43
30	08:16		06:52	05:33	04:37	04:28	05:11	06:12	07:14	08:16	08:20	08:49
	16:40		19:47	20:51	21:47	22:07	21:30	20:17	18:55	17:39	15:45	15:44
31	08:15		06:50		04:36		05:13	06:14		07:18		08:49
	16:42		19:49		21:49		21:28	20:15		16:37		15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Cinguli - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (467)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

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	08:48	10:22 (PrRR3)	08:13	07:09	06:47	05:31	04:34	04:28	05:14	06:15	07:15	08:22
15:46	14	10:36 (PrRR3)	16:43	17:46	19:51	20:53	21:50	22:07	21:26	20:12	18:52	16:34
2	08:48	10:23 (PrRR3)	08:11	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	08:24
15:48	12	10:35 (PrRR3)	16:46	17:48	19:53	20:55	21:52	22:06	21:24	20:09	18:49	16:32
3	08:48	10:25 (PrRR3)	08:09	07:04	06:41	05:26	04:32	04:30	05:18	06:19	07:19	08:25
15:49	10	10:35 (PrRR3)	16:48	17:50	19:55	20:57	21:53	22:06	21:22	20:07	18:46	16:30
4	08:48	10:26 (PrRR3)	08:07	07:01	06:39	05:24	04:31	04:31	05:20	06:21	07:21	08:27
15:50	8	10:34 (PrRR3)	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:44	16:27
5	08:47	10:27 (PrRR3)	08:05	06:58	06:36	05:22	04:30	04:32	05:21	06:23	07:23	08:29
15:52	6	10:33 (PrRR3)	16:52	17:54	19:59	21:01	21:56	22:04	21:17	20:01	18:41	16:25
6	08:47	08:03	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	08:31	08:30
15:53		16:54	17:56	20:01	21:04	21:57	22:04	21:15	19:59	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	08:33	08:32
15:54		16:57	17:58	20:03	21:06	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:51	06:28	05:15	04:27	04:35	05:27	06:29	07:30	08:36	08:33
15:56		16:59	18:01	20:05	21:08	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:45	07:56	06:48	06:26	05:13	04:27	04:36	05:29	06:31	07:32	08:38	08:34
15:58		17:01	18:03	20:08	21:10	22:00	22:01	21:09	19:51	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:38	05:31	06:33	07:34	08:40	08:36
15:59		17:03	18:05	20:10	21:12	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:36	08:42	08:37
16:01		17:06	18:07	20:12	21:14	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:50	06:40	06:18	05:07	04:25	04:40	05:35	06:37	07:38	08:44	08:38
16:03		17:08	18:09	20:14	21:16	22:03	21:58	21:02	19:43	18:23	16:11	15:36
13	08:41	07:47	06:37	06:15	05:05	04:25	04:42	05:37	06:39	07:40	08:46	08:39
16:04		17:10	18:11	20:16	21:17	22:04	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:13	05:03	04:24	04:43	05:39	06:41	07:42	08:49	08:40
16:06		17:12	18:13	20:18	21:19	22:04	21:56	20:57	19:37	18:18	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	08:51	08:41
16:08		17:15	18:15	20:20	21:21	22:05	21:54	20:55	19:35	18:15	16:06	15:36
16	08:38	07:40	06:30	06:07	04:59	04:24	04:46	05:43	06:45	07:46	08:53	08:42
16:10		17:17	18:18	20:22	21:23	22:06	21:53	20:52	19:32	18:12	16:04	15:36
17	08:37	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	08:55	08:43
16:12		17:19	18:20	20:24	21:25	22:06	21:52	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	08:57	08:44
16:14		17:21	18:22	20:26	21:27	22:07	21:50	20:47	19:27	18:07	16:01	15:36
19	08:34	07:33	06:22	06:00	04:53	04:23	04:51	05:49	06:51	07:52	08:59	08:45
16:16		17:24	18:24	20:28	21:29	22:07	21:49	20:45	19:24	18:05	15:59	15:36
20	08:33	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:55	08:01	08:46
16:18		17:26	18:26	20:30	21:31	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:29	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:57	08:03	08:46
16:20		17:28	18:28	20:33	21:33	22:08	21:46	20:40	19:18	18:00	15:56	15:37
22	08:30	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:47
16:22		17:30	18:30	20:35	21:34	22:08	21:44	20:38	19:16	17:57	15:54	15:38
23	08:28	07:24	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
16:24		17:32	18:32	20:37	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:27	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:48
16:26		17:35	18:34	20:39	21:38	22:08	21:41	20:32	19:10	17:53	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	07:05	08:11	08:48
16:28		17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:08	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	07:07	08:13	08:48
16:30		17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:22	07:14	06:00	05:40	04:40	04:26	05:04	06:05	07:07	07:10	08:15	08:49
16:32		17:41	18:41	20:45	21:43	22:08	21:35	20:25	19:02	16:46	15:48	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	07:12	08:17	08:49
16:35		17:43	18:43	20:47	21:44	22:08	21:33	20:22	19:00	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	07:14	08:18	08:49
16:37			19:45	20:49	21:46	22:07	21:32	20:20	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	07:16	08:20	08:49
16:39			19:47	20:51	21:47	22:07	21:30	20:17	18:54	16:39	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:49
16:41			19:49		21:49		21:28	20:15		16:36		15:45
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
Total, worst case	50											374
Sun reduction	0,13											0,08
Oper. time red.	1,00											1,00
Wind dir. red.	1,00											1,00
Total reduction	0,13											0,08
Total, real	7											32

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:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Eveles - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (498)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:36	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:43	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:09	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:06	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:37
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:03	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:01	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:51	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:56	05:55	06:57	07:59	08:05	08:46
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:38
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:19	06:05	05:45	04:43	04:25	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:03	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:14	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:38	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		06:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		



Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Irisi - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (470)  
 Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
 1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:49 15:46	08:13 16:43	07:09 17:46	06:47 19:51	05:31 20:53	04:34 21:50	04:28 22:07	05:14 21:26	06:15 20:12	07:15 18:52	07:21 16:34	08:22 15:43
2	08:48 15:48	08:11 16:46	07:06 17:48	06:44 19:53	05:28 20:55	04:33 21:52	04:29 22:06	05:16 21:24	06:17 20:09	07:17 18:49	07:23 16:32	08:24 15:42
3	08:48 15:49	08:09 16:48	07:04 17:50	06:41 19:55	05:26 20:57	04:32 21:53	04:30 22:06	05:18 21:22	06:19 20:07	07:19 18:46	07:25 16:30	08:25 15:41
4	08:48 15:50	08:07 16:50	07:01 17:52	06:39 19:57	05:24 21:00	04:31 21:54	04:31 22:05	05:20 21:20	06:21 20:04	07:21 18:44	07:27 16:28	08:27 15:41
5	08:47 15:52	08:05 16:52	06:58 17:54	06:36 19:59	05:22 21:02	04:30 21:56	04:32 22:05	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:29 15:40
6	08:47 15:53	08:03 16:54	06:56 17:56	06:34 20:01	05:19 21:04	04:29 21:57	04:33 22:04	05:23 21:15	06:25 19:59	07:25 18:38	07:31 16:23	08:30 15:39
7	08:46 15:54	08:01 16:57	06:53 17:59	06:31 20:03	05:17 21:06	04:28 21:58	04:34 22:03	05:25 21:13	06:27 19:56	07:28 18:36	07:34 16:21	08:32 15:38
8	08:45 15:56	07:58 16:59	06:51 18:01	06:28 20:06	05:15 21:08	04:27 21:59	04:35 22:02	05:27 21:11	06:29 19:53	07:30 18:33	07:36 16:19	08:33 15:38
9	08:45 15:58	07:56 17:01	06:48 18:03	06:26 20:08	05:13 21:10	04:27 22:00	04:36 22:01	05:29 21:09	06:31 19:51	07:32 18:31	07:38 16:17	08:34 15:37
10	08:44 15:59	07:54 17:03	06:45 18:05	06:23 20:10	05:11 21:12	04:26 22:01	04:38 22:00	05:31 21:06	06:33 19:48	07:34 18:28	07:40 16:15	08:36 15:37
11	08:43 16:01	07:52 17:06	06:43 18:07	06:20 20:12	05:09 21:14	04:26 22:02	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 15:37
12	08:42 16:03	07:50 17:08	06:40 18:09	06:18 20:14	05:07 21:16	04:25 22:03	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	07:44 16:11	08:38 15:36
13	08:41 16:04	07:47 17:10	06:38 18:11	06:15 20:16	05:05 21:18	04:25 22:04	04:42 21:57	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:39 15:36
14	08:40 16:06	07:45 17:12	06:35 18:13	06:13 20:18	05:03 21:20	04:24 22:04	04:43 21:56	05:39 20:57	06:41 19:37	07:42 18:18	07:49 16:08	08:41 15:36
15	08:39 16:08	07:43 17:15	06:32 18:16	06:10 20:20	05:01 21:21	04:24 22:05	04:44 21:54	05:41 20:55	06:43 19:35	07:44 18:15	07:51 16:06	08:42 15:36
16	08:38 16:10	07:41 17:17	06:30 18:18	06:07 20:22	04:59 21:23	04:24 22:06	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:12	07:53 16:04	08:43 15:36
17	08:37 16:12	07:38 17:19	06:27 18:20	06:05 20:24	04:57 21:25	04:23 22:06	04:47 21:52	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 15:36
18	08:35 16:14	07:36 17:21	06:24 18:22	06:02 20:26	04:55 21:27	04:23 22:07	04:49 21:50	05:47 20:47	06:49 19:27	07:50 18:07	07:57 16:01	08:44 15:36
19	08:34 16:16	07:33 17:24	06:22 18:24	06:00 20:28	04:53 21:29	04:23 22:07	04:51 21:49	05:49 20:45	06:51 19:24	07:53 18:05	07:59 15:59	08:45 15:36
20	08:33 16:18	07:31 17:26	06:19 18:26	05:57 20:30	04:52 21:31	04:23 22:08	04:52 21:47	05:51 20:43	06:53 19:21	07:55 18:02	08:01 15:57	08:46 15:37
21	08:31 16:20	07:29 17:28	06:16 18:28	05:55 20:33	04:50 21:33	04:24 22:08	04:54 21:46	05:53 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 15:37
22	08:30 16:22	07:26 17:30	06:14 18:30	05:52 20:35	04:48 21:34	04:24 22:08	04:56 21:44	05:55 20:38	06:57 19:16	07:59 17:58	08:05 15:54	08:47 15:38
23	08:28 16:24	07:24 17:32	06:11 18:32	05:50 20:37	04:47 21:36	04:24 22:08	04:57 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 15:38
24	08:27 16:26	07:21 17:35	06:08 18:34	05:47 20:39	04:45 21:38	04:24 22:08	04:59 21:41	05:59 20:33	07:01 19:10	08:03 17:53	08:09 15:51	08:48 15:39
25	08:25 16:28	07:19 17:37	06:06 18:36	05:45 20:41	04:43 21:40	04:25 22:08	05:01 21:39	06:01 20:30	07:03 19:08	08:05 16:50	08:11 15:50	08:48 15:39
26	08:23 16:30	07:16 17:39	06:03 18:39	05:42 20:43	04:42 21:41	04:25 22:08	05:03 21:37	06:03 20:27	07:05 19:05	08:07 16:48	08:13 15:49	08:48 15:40
27	08:22 16:32	07:14 17:41	06:00 18:41	05:40 20:45	04:40 21:43	04:26 22:08	05:04 21:35	06:05 20:25	07:07 19:02	08:09 16:46	08:15 15:48	08:49 15:41
28	08:20 16:35	07:11 17:43	05:57 18:43	05:38 20:47	04:39 21:44	04:26 22:08	05:06 21:34	06:07 20:22	07:09 19:00	08:12 16:43	08:17 15:46	08:49 15:42
29	08:18 16:37		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:08	05:08 21:32	06:09 20:20	07:11 18:57	08:19 16:41	08:29 15:45	08:49 15:43
30	08:16 16:39		06:52 19:47	05:33 20:51	04:36 21:47	04:27 22:07	05:10 21:30	06:11 20:17	07:13 18:54	08:20 16:39	08:30 15:44	08:49 15:44
31	08:15 16:41		06:49 19:49		04:35 21:49		05:12 21:28	06:13 20:15	07:18 16:36			08:49 15:45
Potential sun hours	235	266	366	426	508	528	529	469	384	324	248	216
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)
	Minutes with flicker		

Project:

Flickering\_Vestas\_V162\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 14:55/4.1.254

## SHADOW - Calendar

Calculation: Flickering\_Vestas\_V162\_Prikuli\_A Shadow receptor: Uzuli - Shadow Receptor: 1,0 × 1,0 Azimuth: 3,1° Slope: 90,0° (533)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
1,02 2,14 4,62 6,27 9,21 10,00 8,04 7,90 5,53 3,03 0,62 0,59

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	08:48	08:12	07:08	06:47	05:30	04:34	04:28	05:14	06:15	07:15	07:20	08:22
	15:46	16:43	17:45	19:51	20:53	21:50	22:06	21:25	20:12	18:51	16:34	15:43
2	08:48	08:10	07:06	06:44	05:28	04:33	04:29	05:16	06:17	07:17	07:22	08:23
	15:47	16:45	17:48	19:53	20:55	21:51	22:06	21:23	20:09	18:49	16:32	15:42
3	08:48	08:08	07:03	06:41	05:26	04:32	04:30	05:17	06:19	07:19	07:25	08:25
	15:49	16:48	17:50	19:55	20:57	21:53	22:05	21:21	20:06	18:46	16:29	15:41
4	08:47	08:06	07:01	06:39	05:24	04:31	04:31	05:19	06:21	07:21	07:27	08:27
	15:50	16:50	17:52	19:57	20:59	21:54	22:05	21:19	20:04	18:43	16:27	15:40
5	08:47	08:04	06:58	06:36	05:21	04:30	04:32	05:21	06:23	07:23	07:29	08:28
	15:51	16:52	17:54	19:59	21:01	21:55	22:04	21:17	20:01	18:41	16:25	15:40
6	08:46	08:02	06:56	06:33	05:19	04:29	04:33	05:23	06:25	07:25	07:31	08:30
	15:53	16:54	17:56	20:01	21:03	21:56	22:03	21:15	19:58	18:38	16:23	15:39
7	08:46	08:00	06:53	06:31	05:17	04:28	04:34	05:25	06:27	07:27	07:33	08:31
	15:54	16:57	17:58	20:03	21:05	21:58	22:03	21:13	19:56	18:35	16:21	15:38
8	08:45	07:58	06:50	06:28	05:15	04:27	04:35	05:27	06:29	07:29	07:35	08:33
	15:56	16:59	18:00	20:05	21:07	21:59	22:02	21:11	19:53	18:33	16:19	15:38
9	08:44	07:56	06:48	06:25	05:13	04:27	04:36	05:29	06:31	07:31	07:38	08:34
	15:57	17:01	18:03	20:07	21:09	22:00	22:01	21:08	19:50	18:30	16:17	15:37
10	08:44	07:54	06:45	06:23	05:11	04:26	04:37	05:31	06:33	07:33	07:40	08:35
	15:59	17:03	18:05	20:09	21:11	22:01	22:00	21:06	19:48	18:28	16:15	15:37
11	08:43	07:52	06:43	06:20	05:08	04:25	04:39	05:33	06:35	07:35	07:42	08:37
	16:01	17:05	18:07	20:11	21:13	22:02	21:59	21:04	19:45	18:25	16:13	15:36
12	08:42	07:49	06:40	06:18	05:06	04:25	04:40	05:35	06:37	07:38	07:44	08:38
	16:02	17:08	18:09	20:14	21:15	22:03	21:58	21:01	19:42	18:22	16:11	15:36
13	08:41	07:47	06:37	06:15	05:04	04:24	04:41	05:37	06:39	07:40	07:46	08:39
	16:04	17:10	18:11	20:16	21:17	22:03	21:57	20:59	19:40	18:20	16:09	15:36
14	08:40	07:45	06:35	06:12	05:02	04:24	04:43	05:39	06:41	07:42	07:48	08:40
	16:06	17:12	18:13	20:18	21:19	22:04	21:55	20:57	19:37	18:17	16:07	15:36
15	08:39	07:43	06:32	06:10	05:00	04:24	04:44	05:41	06:43	07:44	07:50	08:41
	16:08	17:14	18:15	20:20	21:21	22:05	21:54	20:54	19:34	18:15	16:06	15:36
16	08:37	07:40	06:29	06:07	04:59	04:24	04:46	05:43	06:45	07:46	07:52	08:42
	16:10	17:17	18:17	20:22	21:23	22:05	21:53	20:52	19:32	18:12	16:04	15:36
17	08:36	07:38	06:27	06:05	04:57	04:23	04:47	05:45	06:47	07:48	07:55	08:43
	16:12	17:19	18:19	20:24	21:25	22:06	21:51	20:50	19:29	18:10	16:02	15:36
18	08:35	07:36	06:24	06:02	04:55	04:23	04:49	05:47	06:49	07:50	07:57	08:44
	16:14	17:21	18:22	20:26	21:27	22:06	21:50	20:47	19:26	18:07	16:00	15:36
19	08:34	07:33	06:21	06:00	04:53	04:23	04:50	05:49	06:51	07:52	07:59	08:45
	16:16	17:23	18:24	20:28	21:29	22:07	21:48	20:45	19:24	18:05	15:59	15:36
20	08:32	07:31	06:19	05:57	04:51	04:23	04:52	05:51	06:53	07:54	08:01	08:45
	16:18	17:26	18:26	20:30	21:30	22:07	21:47	20:42	19:21	18:02	15:57	15:37
21	08:31	07:28	06:16	05:55	04:50	04:23	04:54	05:53	06:55	07:56	08:03	08:46
	16:20	17:28	18:28	20:32	21:32	22:07	21:45	20:40	19:18	18:00	15:56	15:37
22	08:29	07:26	06:13	05:52	04:48	04:24	04:55	05:55	06:57	07:59	08:05	08:47
	16:22	17:30	18:30	20:34	21:34	22:08	21:44	20:37	19:16	17:57	15:54	15:37
23	08:28	07:23	06:11	05:50	04:46	04:24	04:57	05:57	06:59	08:01	08:07	08:47
	16:24	17:32	18:32	20:36	21:36	22:08	21:42	20:35	19:13	17:55	15:53	15:38
24	08:26	07:21	06:08	05:47	04:45	04:24	04:59	05:59	07:01	08:03	08:09	08:47
	16:26	17:34	18:34	20:38	21:37	22:08	21:40	20:32	19:10	17:52	15:51	15:39
25	08:25	07:18	06:05	05:45	04:43	04:24	05:01	06:01	07:03	08:05	08:11	08:48
	16:28	17:37	18:36	20:41	21:39	22:08	21:39	20:30	19:07	16:50	15:50	15:39
26	08:23	07:16	06:03	05:42	04:42	04:25	05:02	06:03	07:05	08:07	08:13	08:48
	16:30	17:39	18:38	20:43	21:41	22:08	21:37	20:27	19:05	16:48	15:49	15:40
27	08:21	07:13	06:00	05:40	04:40	04:25	05:04	06:05	07:07	08:09	08:14	08:48
	16:32	17:41	18:40	20:45	21:42	22:08	21:35	20:25	19:02	16:45	15:47	15:41
28	08:20	07:11	05:57	05:37	04:39	04:26	05:06	06:07	07:09	08:11	08:16	08:48
	16:34	17:43	18:42	20:47	21:44	22:07	21:33	20:22	18:59	16:43	15:46	15:42
29	08:18		05:55	05:35	04:38	04:27	05:08	06:09	07:11	08:14	08:18	08:48
	16:37		19:44	20:49	21:46	22:07	21:31	20:19	18:57	16:41	15:45	15:43
30	08:16		06:52	05:33	04:36	04:27	05:10	06:11	07:13	08:16	08:20	08:48
	16:39		19:47	20:51	21:47	22:07	21:29	20:17	18:54	16:38	15:44	15:44
31	08:14		06:49		04:35		05:12	06:13		07:18		08:48
	16:41		19:49		21:49		21:27	20:14		16:36		15:45
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
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)
	Minutes with flicker		

Flickering\_Vestas\_V162\_Prikuli\_A

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
15.07.2025 14:55/4.1.254

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,02	2,14	4,62	6,27	9,21	10,00	8,04	7,90	5,53	3,03	0,62	0,59

January		February		March		April		May		June		July		August		September		October		November		December	
08:48	08:12			07:09		17:07 (PrRR3)	06:47	05:30		04:34	04:28	05:14	06:15	07:15		17:46 (PrRR3)	07:20		08:22				
15:46	16:43			17:45	10	17:17 (PrRR3)	19:51	20:53		21:50	22:06	21:25	20:12	18:51	9	17:55 (PrRR3)	16:34		15:43				
08:48	08:10			07:06		17:05 (PrRR3)	06:44	05:28		04:33	04:29	05:16	06:17	07:17		17:43 (PrRR3)	07:22		08:23				
15:47	16:45			17:48	13	17:18 (PrRR3)	19:53	20:55		21:51	22:06	21:23	20:09	18:49	14	17:57 (PrRR3)	16:32		15:42				
08:48	08:08			07:03		17:03 (PrRR3)	06:41	05:26		04:32	04:30	05:17	06:19	07:19		17:41 (PrRR3)	07:25		08:25				
15:49	16:48			17:50	17	17:20 (PrRR3)	19:55	20:57		21:53	22:05	21:21	20:06	18:46	17	17:58 (PrRR3)	16:30		15:41				
08:47	08:06			07:01		17:03 (PrRR3)	06:39	05:24		04:31	04:31	05:19	06:21	07:21		17:40 (PrRR3)	07:27		08:27				
15:50	16:50			17:52	20	17:23 (PrRR3)	19:57	20:59		21:54	22:05	21:19	20:04	18:43	18	17:58 (PrRR3)	16:27		15:40				
08:47	08:04			06:58		17:02 (PrRR3)	06:36	05:21		04:30	04:32	05:21	06:23	07:23		17:39 (PrRR3)	07:29		08:28				
15:51	16:52			17:54	21	17:23 (PrRR3)	19:59	21:01		21:55	22:04	21:17	20:01	18:41	20	17:59 (PrRR3)	16:25		15:40				
08:46	08:02			06:56		17:01 (PrRR3)	06:33	05:19		04:29	04:33	05:23	06:25	07:25		17:38 (PrRR3)	07:31		08:30				
15:53	16:54			17:56	21	17:22 (PrRR3)	20:01	21:03		21:57	22:03	21:15	19:59	18:38	21	17:59 (PrRR3)	16:23		15:39				
08:46	08:00			06:53		17:02 (PrRR3)	06:31	05:17		04:28	04:34	05:25	06:27	07:27		17:37 (PrRR3)	07:33		08:31				
15:54	16:57			17:58	21	17:23 (PrRR3)	20:03	21:05		21:58	22:03	21:13	19:56	18:36	21	17:58 (PrRR3)	16:21		15:38				
08:45	07:58			06:50		17:01 (PrRR3)	06:28	05:15		04:27	04:35	05:27	06:29	07:29		17:37 (PrRR3)	07:35		08:33				
15:56	16:59			18:00	21	17:22 (PrRR3)	20:05	21:07		21:59	22:02	21:11	19:53	18:33	21	17:58 (PrRR3)	16:19		15:38				
08:44	07:56			06:48		17:01 (PrRR3)	06:25	05:13		04:27	04:36	05:29	06:31	07:31		17:37 (PrRR3)	07:38		08:34				
15:57	17:01			18:03	20	17:21 (PrRR3)	20:07	21:09		22:00	22:01	21:08	19:51	18:30	20	17:57 (PrRR3)	16:10		15:37				
08:44	07:54			06:45		17:03 (PrRR3)	06:23	05:11		04:26	04:37	05:31	06:33	07:33		17:37 (PrRR3)	07:40		08:35				
15:59	17:03			18:05	17	17:20 (PrRR3)	20:09	21:11		22:01	22:00	21:06	19:48	18:28	19	17:56 (PrRR3)	16:15		15:37				
08:43	07:52			06:43		17:03 (PrRR3)	06:20	05:09		04:25	04:39	05:33	06:35	07:36		17:38 (PrRR3)	07:42						