

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: AP2 - VESTAS V172-7.2 7200 172.0 !OI hub: 175,0 m (TOT: 261,0 m) (30)  
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	16:39-16:44/5	06:47	05:31	19:54-20:18/24	04:34				
	15:46	16:43	17:46	16:50-17:13/23	19:51	20:53		21:50				
2	08:48	08:11	07:06	16:49-17:12/23	06:44	05:28	19:54-20:18/24	04:33				
	15:48	16:46	17:48		19:53	20:55		21:52				
3	08:48	08:09	07:04	16:48-17:12/24	06:41	05:26	19:53-20:19/26	04:32				
	15:49	16:48	17:50		19:55	20:57		21:53				
4	08:47	08:07	07:01	16:49-17:12/23	06:39	05:24	19:53-20:19/26	04:31				
	15:50	16:50	17:52		19:57	20:59		21:54				
5	08:47	08:05	06:58	16:49-17:12/23	06:36	05:22	19:53-20:19/26	04:30				
	15:52	16:52	17:54		19:59	21:01		21:55				
6	08:46	08:02	06:56	16:50-17:12/22	06:34	05:19	19:53-20:20/27	04:29				
	15:53	16:55	17:56		20:01	21:03		21:57				
7	08:46	08:00	06:53	16:50-17:10/20	06:31	05:17	19:53-20:19/26	04:28				
	15:55	16:57	17:59		20:03	21:05		21:58				
8	08:45	07:58	06:51	16:51-17:09/18	06:28	05:15	19:53-20:19/26	04:28				
	15:56	16:59	18:01		20:05	21:07		21:59				
9	08:44	07:56	06:48	16:52-17:06/14	06:26	05:13	19:53-20:19/26	04:27				
	15:58	17:01	18:03		20:08	21:09		22:00				
10	08:44	07:54	06:45	16:55-17:04/9	06:23	05:11	19:53-20:18/25	04:26				
	15:59	17:04	18:05		20:10	21:11		22:01				
11	08:43	07:52	06:43		06:20	05:09	19:53-20:18/25	04:26				
	16:01	17:06	18:07		20:12	21:13		22:02				
12	08:42	07:50	06:40		06:18	05:07	19:53-20:17/24	04:25				
	16:03	17:08	18:09		20:14	21:15		22:03				
13	08:41	07:47	06:37		06:15	05:05	19:55-20:17/22	04:25				
	16:05	17:10	18:11		20:16	21:17		22:03				
14	08:40	07:45	06:35		06:13	05:03	19:55-20:16/21	04:24				
	16:06	17:12	18:13		20:18	21:19		22:04				
15	08:39	07:43	06:32	16:38-16:44/6	06:10	05:01	19:56-20:15/19	04:24				
	16:08	17:15	18:16		20:20	21:21		22:05				
16	08:38	07:40	06:30	16:35-16:46/11	06:07	04:59	19:57-20:14/17	04:24				
	16:10	17:17	18:18		20:22	21:23		22:05				
17	08:36	07:38	06:27	16:34-16:49/15	06:05	04:57	19:59-20:13/14	04:24				
	16:12	17:19	18:20		20:24	21:25		22:06				
18	08:35	07:36	06:24	16:32-16:50/18	06:02	04:55	20:00-20:11/11	04:24				
	16:14	17:21	18:22		20:26	21:27		22:06				
19	08:34	07:33	06:22	16:32-16:53/21	06:00	04:53	20:04-20:09/5	04:24				
	16:16	17:24	18:24		20:28	21:29		22:07				
20	08:32	07:31	06:19	16:31-16:52/21	05:57	04:52		04:24				
	16:18	17:26	18:26		20:30	21:31		22:07				
21	08:31	07:29	06:16	16:31-16:53/22	05:55	04:50		04:24				
	16:20	17:28	18:28		20:32	21:32		22:08				
22	08:30	07:26	06:14	16:31-16:53/22	05:52	04:48		04:24				
	16:22	17:30	18:30		20:35	21:34		22:08				
23	08:28	07:24	06:11	16:30-16:52/22	05:50	04:47		04:24				
	16:24	17:32	18:32		20:37	21:36		22:08				
24	08:26	07:21	06:08	16:31-16:52/21	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	16:31-16:51/20	05:45	04:44		04:25				
	16:28	17:37	18:36	16:54-17:07/13	20:41	21:39		22:08				
26	08:23	07:16	06:03	16:32-16:51/19	05:43	04:42		04:25				
	16:30	17:39	18:38	16:53-17:10/17	20:43	21:41		22:08				
27	08:22	07:14	06:00	16:33-16:49/16	05:40	04:41		04:26				
	16:33	17:41	18:41	16:52-17:11/19	20:45	21:43		22:08				
28	08:20	07:11	05:57	16:35-16:47/12	05:38	04:39		04:26				
	16:35	17:43	18:43	16:50-17:12/22	20:47	21:44		22:08				
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		05:33	04:37		04:28				
	16:39		19:47		20:51	21:47		22:07				
31	08:14		06:49			04:35						
	16:41		19:49			21:49						
Potential sun hours	236	266	366		426	507		528				
Sum of minutes with flicker	0	324	204		382	414		0				

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

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

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## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: AP2 - VESTAS V172-7.2 7200 172.0 !O! hub: 175,0 m (TOT: 261,0 m) (30)  
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 20:03-20:28/25 21:26	06:15 19:25-19:41/16 20:12	07:15 18:52	07:20 16:34	08:22 15:43
2	04:29 22:06	05:16 20:03-20:28/25 21:24	06:17 19:26-19:39/13 20:09	07:17 18:49	07:23 16:32	08:24 15:42
3	04:30 22:06	05:18 20:03-20:29/26 21:21	06:19 19:28-19:37/9 20:07	07:19 17:35-17:41/6 18:46	07:25 16:30	08:25 15:42
4	04:31 22:05	05:20 20:03-20:29/26 21:19	06:21 20:04	07:21 17:31-17:44/13 18:44	07:27 16:28	08:27 15:41
5	04:32 22:04	05:22 20:03-20:30/27 21:17	06:23 20:01	07:23 17:28-17:45/17 18:41	07:29 16:25	08:28 15:40
6	04:33 22:04	05:24 20:02-20:29/27 21:15	06:25 19:59	07:25 17:27-17:46/19 18:38	07:31 16:23	08:30 15:39
7	04:34 22:03	05:26 20:02-20:29/27 21:13	06:27 19:56	07:27 17:25-17:46/21 18:36	07:33 16:21	08:31 15:39
8	04:35 22:02	05:27 20:02-20:29/27 21:11	06:29 19:53	07:29 17:24-17:47/23 18:33	07:36 16:19	08:33 15:38
9	04:36 22:01	05:29 20:02-20:29/27 21:08	06:31 19:51	07:32 17:23-17:47/24 18:30	07:38 16:17	08:34 15:38
10	04:38 22:00	05:31 20:03-20:28/25 21:06	06:33 19:48	07:34 17:23-17:46/23 18:28	07:40 16:15	08:36 15:37
11	04:39 21:59	05:33 20:02-20:27/25 21:04	06:35 19:45	07:36 17:23-17:47/24 18:25	07:42 16:13	08:37 15:37
12	04:40 21:58	05:35 20:03-20:26/23 21:02	06:37 19:43	07:38 17:23-17:46/23 18:23	07:44 16:11	08:38 15:37
13	04:42 21:57	05:37 20:04-20:25/21 20:59	06:39 19:40	07:40 17:10-17:19/9 18:20	07:46 16:09	08:39 15:36
14	04:43 21:55	05:39 20:05-20:24/19 20:57	06:41 19:37	07:42 17:07-17:21/14 18:18	07:48 16:08	08:40 15:36
15	04:45 21:54	05:41 20:07-20:22/15 20:55	06:43 19:35	07:44 17:05-17:22/17 18:15	07:51 16:06	08:41 15:36
16	04:46 21:53	05:43 20:09-20:20/11 20:52	06:45 19:32	07:46 17:04-17:23/19 18:12	07:53 16:04	08:42 15:36
17	04:48 21:51	05:45 20:50	06:47 19:29	07:48 17:03-17:23/20 18:10	07:55 16:02	08:43 15:36
18	04:49 21:50	05:47 19:35-19:39/4 20:47	06:49 19:27	07:50 17:02-17:24/22 18:07	07:57 16:01	08:44 15:36
19	04:51 21:49	05:49 19:31-19:43/12 20:45	06:51 19:24	07:52 17:01-17:23/22 18:05	07:59 15:59	08:45 15:37
20	04:52 21:47	05:51 19:29-19:45/16 20:42	06:53 19:21	07:55 17:02-17:24/22 18:02	08:01 15:57	08:45 15:37
21	04:54 21:46	05:53 19:28-19:46/18 20:40	06:55 19:18	07:57 17:02-17:23/21 18:00	08:03 15:56	08:46 15:37
22	04:56 21:44	05:55 19:27-19:47/20 20:37	06:57 19:16	07:59 17:02-17:23/21 17:58	08:05 15:54	08:47 15:38
23	04:57 21:42	05:57 19:26-19:47/21 20:35	06:59 19:13	08:01 17:02-17:22/20 17:55	08:07 15:53	08:47 15:38
24	04:59 21:41	05:59 19:25-19:48/23 20:32	07:01 19:10	08:03 17:03-17:20/17 17:53	08:09 15:52	08:48 15:39
25	05:01 20:13-20:21/8 21:39	06:01 19:25-19:48/23 20:30	07:03 19:08	07:05 16:04-16:17/13 16:50	08:11 15:50	08:48 15:40
26	05:03 20:10-20:22/12 21:37	06:03 19:23-19:47/24 20:27	07:05 19:05	07:07 16:05-16:14/9 16:48	08:13 15:49	08:48 15:40
27	05:05 20:08-20:24/16 21:35	06:05 19:23-19:47/24 20:25	07:07 19:02	07:10 16:08-16:13/5 16:46	08:15 15:48	08:48 15:41
28	05:06 20:08-20:26/18 21:33	06:07 19:23-19:47/24 20:22	07:09 19:00	07:12 16:43	08:16 15:47	08:49 15:42
29	05:08 20:06-20:26/20 21:31	06:09 19:23-19:46/23 20:20	07:11 18:57	07:14 16:41	08:18 15:45	08:49 15:43
30	05:10 20:05-20:27/22 21:30	06:11 19:23-19:45/22 20:17	07:13 18:54	07:16 16:39	08:20 15:44	08:49 15:44
31	05:12 20:05-20:28/23 21:28	06:13 19:24-19:44/20 20:14		07:18 16:36		08:48 15:45
Potential sun hours		529	469	384	324	248
Sum of minutes with flicker		119	650	38	537	0

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

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

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## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: AP6.1 - VESTAS V172-7.2 7200 172.0 !OI hub: 175,0 m (TOT: 261,0 m) (31)  
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 10:18-10:50/32 15:47	08:12 16:43 17:46	07:09 19:51 20:53	06:47 19:51 20:53	05:31 21:50 22:07	04:34 21:50 22:07	04:28 21:26 20:12	05:14 21:26 20:12	06:15 18:52 16:34	07:15 18:52 16:34	07:20 18:52 16:34	08:22 15:43 10:17-10:31/14
2	08:48 10:19-10:50/31 15:48	08:11 16:46 17:48	07:06 19:53 20:55	06:44 19:53 20:55	05:28 21:52 22:06	04:33 21:52 22:06	04:29 21:24 20:09	05:16 21:24 20:09	06:17 18:49 16:32	07:17 18:49 16:32	07:23 18:49 16:32	08:24 15:42 10:16-10:32/16
3	08:48 10:20-10:51/31 15:49	08:09 16:48 17:50	07:04 19:55 20:57	06:41 19:55 20:57	05:26 21:53 22:06	04:32 21:53 22:06	04:30 21:21 20:07	05:18 21:21 20:07	06:19 18:46 16:30	07:19 18:46 16:30	07:25 18:46 16:30	08:25 15:42 10:16-10:34/18
4	08:47 10:21-10:51/30 15:50	08:07 16:50 17:52	07:01 19:57 20:59	06:39 19:57 20:59	05:24 21:54 22:05	04:31 21:54 22:05	04:31 21:19 20:04	05:20 21:19 20:04	06:21 18:44 16:28	07:21 18:44 16:28	07:27 18:44 16:28	08:27 15:41 10:16-10:35/19
5	08:47 10:22-10:50/28 15:52	08:05 16:52 17:54	06:58 19:59 21:01	06:36 19:59 21:01	05:22 21:55 22:04	04:30 21:55 22:04	04:32 21:17 20:01	05:22 21:17 20:01	06:23 18:41 16:25	07:23 18:41 16:25	07:29 18:41 16:25	08:28 15:40 10:16-10:36/20
6	08:46 10:25-10:51/26 15:53	08:03 16:55 17:56	06:56 19:59 21:03	06:34 19:59 21:03	05:19 21:57 22:04	04:29 21:57 22:04	04:33 21:15 19:59	05:24 21:15 19:59	06:25 18:38 16:23	07:25 18:38 16:23	07:31 18:38 16:23	08:30 15:39 10:10-10:36/26
7	08:46 10:31-10:51/20 15:55	08:00 16:57 17:59	06:53 19:59 21:05	06:31 19:59 21:05	05:17 21:58 22:03	04:28 21:58 22:03	04:34 21:13 19:56	05:26 21:13 19:56	06:27 18:36 16:21	07:27 18:36 16:21	07:33 18:36 16:21	08:31 15:39 10:09-10:38/29
8	08:45 10:32-10:51/19 15:56	07:58 16:59 18:01	06:51 19:59 21:07	06:28 19:59 21:07	05:15 21:59 22:02	04:28 21:59 22:02	04:35 21:11 19:53	05:27 21:11 19:53	06:29 18:33 16:19	07:30 18:33 16:19	07:36 18:33 16:19	08:33 15:38 10:09-10:39/30
9	08:44 10:33-10:51/18 15:58	07:56 16:59 18:03	06:48 19:59 21:09	06:26 19:59 21:09	05:13 21:59 22:01	04:27 21:59 22:01	04:36 21:08 19:51	05:29 21:08 19:51	06:31 18:31 16:17	07:32 18:31 16:17	07:38 18:31 16:17	08:34 15:38 10:08-10:39/31
10	08:44 10:34-10:50/16 15:59	07:54 17:04 18:05	06:45 19:59 21:11	06:23 19:59 21:11	05:11 22:01 22:00	04:26 22:01 22:00	04:38 21:06 19:48	05:31 21:06 19:48	06:33 18:28 16:15	07:34 18:28 16:15	07:40 18:28 16:15	08:36 15:37 10:09-10:40/31
11	08:43 10:35-10:49/14 16:01	07:52 17:06 18:07	06:43 19:59 21:13	06:20 19:59 21:13	05:09 22:02 21:59	04:26 22:02 21:59	04:39 21:04 19:45	05:33 21:04 19:45	06:35 18:25 16:13	07:36 18:25 16:13	07:42 18:25 16:13	08:37 15:37 10:08-10:41/33
12	08:42 10:36-10:48/12 16:03	07:50 17:08 18:09	06:40 19:59 21:15	06:18 19:59 21:15	05:07 22:03 21:58	04:25 22:03 21:58	04:40 21:02 19:43	05:35 21:02 19:43	06:37 18:23 16:11	07:38 18:23 16:11	07:44 18:23 16:11	08:38 15:37 10:08-10:41/33
13	08:41 10:39-10:47/8 16:05	07:47 17:10 18:11	06:37 19:59 21:17	06:15 19:59 21:17	05:05 22:03 21:57	04:25 22:03 21:57	04:42 21:09 19:40	05:37 21:09 19:40	06:39 18:20 16:09	07:40 18:20 16:09	07:46 18:20 16:09	08:39 15:36 10:08-10:41/33
14	08:40 16:06 17:13	07:45 17:13 18:13	06:35 19:59 21:19	06:13 19:59 21:19	05:03 22:04 21:55	04:24 22:04 21:55	04:43 21:07 19:37	05:39 21:07 19:37	06:41 18:18 16:08	07:42 18:18 16:08	07:48 18:18 16:08	08:40 15:36 10:09-10:43/34
15	08:39 16:08 17:15	07:43 17:15 18:16	06:32 19:59 21:21	06:10 19:59 21:21	05:01 22:05 21:54	04:24 22:05 21:54	04:45 21:05 19:35	05:41 21:05 19:35	06:43 18:15 16:06	07:44 18:15 16:06	07:51 18:15 16:06	08:41 15:36 10:09-10:43/34
16	08:38 16:10 17:17	07:40 17:17 18:18	06:30 19:59 21:23	06:07 19:59 21:23	04:59 22:05 21:53	04:24 22:05 21:53	04:46 21:05 19:32	05:43 21:05 19:32	06:45 18:13 16:04	07:46 18:13 16:04	07:53 18:13 16:04	08:42 15:36 10:09-10:44/35
17	08:36 16:12 17:19	07:38 17:19 18:20	06:27 19:59 21:25	06:05 19:59 21:25	04:57 22:06 21:52	04:24 22:06 21:52	04:48 21:05 19:29	05:45 21:05 19:29	06:47 18:10 16:02	07:48 18:10 16:02	07:55 18:10 16:02	08:43 15:36 10:10-10:44/34
18	08:35 16:14 17:21	07:36 17:21 18:22	06:24 19:59 21:27	06:02 19:59 21:27	04:55 22:07 21:50	04:24 22:07 21:50	04:49 21:05 19:27	05:47 21:05 19:27	06:49 18:07 16:01	07:50 18:07 16:01	07:57 18:07 16:01	08:44 15:36 10:09-10:44/35
19	08:34 16:16 17:24	07:33 17:24 18:24	06:22 19:59 21:29	06:00 19:59 21:29	04:53 22:07 21:49	04:24 22:07 21:49	04:51 21:05 19:24	05:49 21:05 19:24	06:51 18:05 15:59	07:52 18:05 15:59	07:59 18:05 15:59	08:45 15:37 10:10-10:45/35
20	08:32 16:18 17:26	07:31 17:26 18:26	06:19 19:59 21:31	05:57 19:59 21:31	04:52 22:07 21:47	04:24 22:07 21:47	04:52 21:05 19:21	05:51 21:05 19:21	06:53 18:02 15:57	07:55 18:02 15:57	08:01 18:02 15:57	08:45 15:37 10:11-10:46/35
21	08:31 16:20 17:28	07:29 17:28 18:28	06:16 19:59 21:32	05:55 19:59 21:32	04:50 22:08 21:46	04:24 22:08 21:46	04:54 21:05 19:18	05:53 21:05 19:18	06:55 18:00 15:56	07:57 18:00 15:56	08:03 18:00 15:56	08:46 15:37 10:11-10:46/35
22	08:30 16:22 17:30	07:26 17:30 18:30	06:14 19:59 21:34	05:52 19:59 21:34	04:48 22:08 21:44	04:24 22:08 21:44	04:56 21:05 19:16	05:55 21:05 19:16	06:57 18:00 15:54	07:59 18:00 15:54	08:05 18:00 15:54	08:47 15:38 10:12-10:47/35
23	08:28 16:24 17:32	07:24 17:32 18:32	06:11 19:59 21:36	05:50 19:59 21:36	04:47 22:08 21:42	04:24 22:08 21:42	04:57 21:05 19:13	05:57 21:05 19:13	06:59 18:00 15:53	08:01 18:00 15:53	08:07 18:00 15:53	08:47 15:38 10:12-10:47/35
24	08:27 16:26 17:35	07:21 17:35 18:34	06:08 19:59 21:38	05:47 19:59 21:38	04:45 22:08 21:41	04:24 22:08 21:41	04:59 21:05 19:10	05:59 21:05 19:10	07:01 18:00 15:52	08:03 18:00 15:52	08:09 18:00 15:52	08:48 15:39 10:13-10:48/35
25	08:25 16:28 17:37	07:19 17:37 18:36	06:05 19:59 21:39	05:45 19:59 21:39	04:44 22:08 21:39	04:25 22:08 21:39	05:01 21:05 19:08	06:01 21:05 19:08	07:03 18:00 15:50	08:05 18:00 15:50	08:11 18:00 15:50	08:48 15:40 10:13-10:48/35
26	08:23 16:30 17:39	07:16 17:39 18:38	06:03 19:59 21:41	05:43 19:59 21:41	04:42 22:08 21:37	04:25 22:08 21:37	05:03 21:05 19:05	06:03 21:05 19:05	07:05 18:00 15:48	08:07 18:00 15:48	08:13 18:00 15:48	08:48 15:40 10:14-10:48/34
27	08:22 16:33 17:41	07:14 17:41 18:41	06:00 19:59 21:43	05:40 19:59 21:43	04:41 22:08 21:35	04:26 22:08 21:35	05:05 21:05 19:02	06:05 21:05 19:02	07:07 18:00 15:46	08:09 18:00 15:46	08:15 18:00 15:46	08:48 15:41 10:14-10:49/35
28	08:20 16:35 17:43	07:11 17:43 18:43	05:57 19:59 21:44	05:38 19:59 21:44	04:39 22:08 21:33	04:26 22:08 21:33	05:06 21:05 19:00	06:07 21:05 19:00	07:09 18:00 15:43	08:11 18:00 15:43	08:17 18:00 15:43	08:49 15:42 10:15-10:49/34
29	08:18 16:37 17:47	07:08 17:47 18:47	05:55 19:59 21:46	05:35 19:59 21:46	04:38 22:07 21:31	04:27 22:07 21:31	05:08 21:05 19:00	06:09 21:05 19:00	07:11 18:00 15:41	08:13 18:00 15:41	08:19 18:00 15:41	08:49 15:43 10:16-10:49/33
30	08:16 16:39 17:49	07:06 17:49 18:49	06:52 19:59 21:47	05:33 19:59 21:47	04:37 22:07 21:30	04:28 22:07 21:30	05:10 21:05 19:00	06:11 21:05 19:00	07:13 18:00 15:44	08:15 18:00 15:44	08:21 18:00 15:44	08:49 15:44 10:17-10:50/33
31	08:14 16:41 17:51	07:04 17:51 18:51	06:49 19:59 21:49	04:35 19:59 21:49	04:35 22:07 21:30	04:28 22:07 21:30	05:12 21:05 19:00	06:13 21:05 19:00	07:18 18:00 15:46	08:18 18:00 15:46	08:24 18:00 15:46	08:49 15:45 10:17-10:50/33
Potential sun hours	236	266	366	426	507	528	529	469	384	324	248	217
Sum of minutes with flicker	285	0	0	0	0	0	0	0	0	0	19	952

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: DD1 - VESTAS V172-7.2 7200 172.0 IO! hub: 175,0 m (TOT: 261,0 m) (23)

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	13:33-14:13/40	08:13	13:51-14:17/26	07:09	16:08-16:49/41	06:47	05:31	04:35
	15:47		16:44		17:46		19:51	20:53	21:50
2	08:48	13:34-14:14/40	08:11	13:53-14:16/23	07:06	16:07-16:50/43	06:45	05:29	04:34
	15:48		16:46		17:48		19:53	20:55	21:52
3	08:48	13:34-14:14/40	08:09	13:55-14:14/19	07:04	16:06-16:51/45	06:42	05:27	04:33
	15:50		16:48		17:50	17:21-17:22/1	19:55	20:57	21:53
4	08:47	13:35-14:15/40	08:07	13:59-14:11/12	07:01	16:05-16:51/46	06:39	05:24	04:32
	15:51		16:51		17:53	17:16-17:24/8	19:57	20:59	21:54
5	08:47	13:35-14:16/41	08:05		06:59	16:04-16:51/47	06:37	05:22	04:31
	15:52		16:53		17:55	17:14-17:25/11	19:59	21:02	21:55
6	08:46	13:35-14:16/41	08:03		06:56	16:04-16:52/48	06:34	05:20	04:30
	15:54		16:55		17:57	17:13-17:28/15	20:02	21:04	21:57
7	08:46	13:35-14:17/42	08:01		06:54	16:03-16:52/49	06:31	05:18	04:29
	15:55		16:57		17:59	17:11-17:30/19	20:04	21:06	21:58
8	08:45	13:35-14:17/42	07:58		06:51	16:04-16:52/48	06:29	05:16	04:28
	15:57		17:00		18:01	17:10-17:32/22	20:06	21:08	21:59
9	08:44	13:35-14:18/43	07:56		06:48	16:03-16:52/49	06:26	05:14	04:28
	15:59		17:02		18:03	17:10-17:35/25	20:08	21:10	22:00
10	08:44	13:36-14:18/42	07:54		06:46	16:02-16:51/49	06:23	05:11	04:27
	16:00		17:04		18:05	17:10-17:37/27	20:10	21:12	22:01
11	08:43	13:36-14:19/43	07:52		06:43	16:02-16:51/49	06:21	05:09	04:27
	16:02		17:06		18:07	17:09-17:39/30	20:12	21:14	22:02
12	08:42	13:37-14:20/43	07:50		06:40	16:03-16:51/48	06:18	05:07	04:26
	16:04		17:09		18:10	17:10-17:42/32	20:14	21:16	22:03
13	08:41	13:37-14:20/43	07:48		06:38	16:02-16:50/48	06:16	05:05	04:26
	16:05		17:11		18:12	17:10-17:43/33	20:16	21:17	22:03
14	08:40	13:37-14:20/43	07:45		06:35	16:02-16:49/47	06:13	05:03	04:25
	16:07		17:13		18:14	17:11-17:44/33	20:18	21:19	22:04
15	08:39	13:38-14:21/43	07:43		06:33	16:03-16:49/46	06:11	05:01	04:25
	16:09		17:15		18:16	17:13-17:44/31	20:20	21:21	22:05
16	08:38	13:38-14:22/44	07:41		06:30	16:04-16:48/44	06:08	05:00	04:25
	16:11		17:17		18:18	17:14-17:44/30	20:22	21:23	22:05
17	08:36	13:38-14:21/43	07:38		06:27	16:04-16:46/42	06:05	04:58	04:25
	16:13		17:20		18:20	17:13-17:43/30	20:24	21:25	22:06
18	08:35	13:39-14:22/43	07:36		06:25	16:05-16:46/41	06:03	04:56	04:24
	16:15		17:22		18:22	17:14-17:43/29	20:26	21:27	22:06
19	08:34	13:39-14:22/43	07:34		06:22	16:06-16:44/38	06:00	04:54	04:24
	16:17		17:24		18:24	17:14-17:42/28	20:28	21:29	22:07
20	08:33	13:39-14:22/43	07:31		06:19	16:07-16:42/35	05:58	04:52	04:24
	16:19		17:26		18:26	17:14-17:41/27	20:31	21:31	22:07
21	08:31	13:41-14:23/42	07:29		06:17	16:09-16:41/32	05:55	04:51	04:25
	16:21		17:29		18:28	17:15-17:39/24	20:33	21:32	22:07
22	08:30	13:41-14:23/42	07:26	16:25-16:34/9	06:14	16:11-16:39/28	05:53	04:49	04:25
	16:23		17:31		18:31	17:16-17:37/21	20:35	21:34	22:08
23	08:28	13:41-14:22/41	07:24	16:20-16:39/19	06:11	16:13-16:35/22	05:50	04:47	04:25
	16:25		17:33		18:33	17:17-17:33/16	20:37	21:36	22:08
24	08:27	13:42-14:22/40	07:21	16:17-16:42/25	06:09	16:16-16:31/15	05:48	04:46	04:25
	16:27		17:35		18:35	17:19-17:29/10	20:39	21:38	22:08
25	08:25	13:42-14:22/40	07:19	16:15-16:45/30	06:06		05:46	04:44	04:26
	16:29		17:37		18:37		20:41	21:39	22:08
26	08:23	13:43-14:22/39	07:16	16:13-16:46/33	06:03		05:43	04:43	04:26
	16:31		17:40		18:39		20:43	21:41	22:08
27	08:22	13:44-14:21/37	07:14	16:11-16:47/36	06:01		05:41	04:41	04:27
	16:33		17:42		18:41		20:45	21:43	22:08
28	08:20	13:45-14:21/36	07:11	16:10-16:49/39	05:58		05:38	04:40	04:27
	16:35		17:44		18:43		20:47	21:44	22:07
29	08:18	13:46-14:20/34			06:55		05:36	04:39	04:28
	16:37				19:45		20:49	21:46	22:07
30	08:16	13:47-14:19/32			06:53		05:34	04:37	04:28
	16:40				19:47		20:51	21:47	22:07
31	08:14	13:49-14:18/29			06:50			04:36	
	16:42				19:49			21:49	
Potential sun hours	236		266		366		426	507	528
Sum of minutes with flicker	1254		271		1502		0	0	0

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: DD1 - VESTAS V172-7.2 7200 172.0 IO! hub: 175,0 m (TOT: 261,0 m) (23)

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	05:15 21:26	06:16 20:12	07:16 16:42-17:30/48 18:52 17:50-18:22/32	07:21 16:35	08:22 13:18-14:01/43 15:44
2	04:30 22:06	05:16 21:24	06:18 20:09	07:18 16:41-17:30/49 18:49 17:49-18:19/30	07:23 16:33	08:24 13:19-14:01/42 15:43
3	04:31 22:05	05:18 21:22	06:20 20:07	07:20 16:40-17:29/49 18:47 17:48-18:16/28	07:25 16:30	08:25 13:20-14:02/42 15:42
4	04:32 22:05	05:20 21:19	06:22 20:04	07:22 16:40-17:29/49 18:44 17:48-18:13/25	07:27 16:28	08:27 13:20-14:02/42 15:41
5	04:33 22:04	05:22 21:17	06:24 20:02	07:24 16:40-17:28/48 18:41 17:47-18:10/23	07:29 16:26	08:28 13:20-14:02/42 15:41
6	04:34 22:03	05:24 21:15	06:26 19:59	07:26 16:39-17:28/49 18:39 17:47-18:08/21	07:31 16:24	08:30 13:21-14:02/41 15:40
7	04:35 22:03	05:26 21:13	06:28 19:56	07:28 16:39-17:27/48 18:36 17:48-18:05/17	07:34 13:28-13:41/13 16:22	08:31 13:22-14:03/41 15:39
8	04:36 22:02	05:28 21:11	06:30 19:54	07:30 16:40-17:27/47 18:34 17:48-18:02/14	07:36 13:25-13:44/19 16:20	08:33 13:22-14:03/41 15:39
9	04:37 22:01	05:30 21:09	06:32 19:51	07:32 16:40-17:26/46 18:31 17:50-18:00/10	07:38 13:23-13:47/24 16:18	08:34 13:23-14:03/40 15:38
10	04:39 22:00	05:32 21:06	06:34 19:48	07:34 16:40-17:25/45 18:28 17:52-17:57/5	07:40 13:21-13:48/27 16:16	08:36 13:23-14:03/40 15:38
11	04:40 21:59	05:34 21:04	06:36 19:46	07:36 16:41-17:24/43 18:26	07:42 13:21-13:50/29 16:14	08:37 13:24-14:04/40 15:38
12	04:41 21:58	05:36 21:02	06:38 19:43	07:38 16:41-17:23/42 18:23	07:44 13:19-13:51/32 16:12	08:38 13:25-14:04/39 15:37
13	04:43 21:57	05:38 20:59	06:40 19:40	07:40 16:42-17:22/40 18:21	07:46 13:18-13:52/34 16:10	08:39 13:25-14:04/39 15:37
14	04:44 21:55	05:40 20:57	06:42 19:38	07:42 16:42-17:20/38 18:18	07:49 13:18-13:54/36 16:08	08:40 13:25-14:04/39 15:37
15	04:45 21:54	05:42 20:55	06:44 19:35	07:44 16:44-17:19/35 18:16	07:51 13:17-13:54/37 16:06	08:41 13:26-14:05/39 15:37
16	04:47 21:53	05:44 20:52	06:46 19:32	07:46 16:46-17:17/31 18:13	07:53 13:16-13:54/38 16:05	08:42 13:27-14:05/38 15:37
17	04:48 21:51	05:46 20:50	06:48 19:30	07:48 16:47-17:15/28 18:10	07:55 13:16-13:56/40 16:03	08:43 13:27-14:05/38 15:37
18	04:50 21:50	05:48 20:48	06:50 19:27	07:51 16:49-17:12/23 18:08	07:57 13:16-13:56/40 16:01	08:44 13:28-14:06/38 15:37
19	04:52 21:49	05:50 20:45	06:52 17:05-17:18/13 19:24 18:08-18:15/7	07:53 16:53-17:09/16 18:05	07:59 13:15-13:56/41 16:00	08:45 13:29-14:07/38 15:37
20	04:53 21:47	05:52 20:43	06:54 17:00-17:21/21 19:21 18:04-18:18/14	07:55 18:03 18:03	08:01 13:16-13:58/42 15:58	08:45 13:29-14:06/37 15:38
21	04:55 21:46	05:54 20:40	06:56 16:57-17:24/27 19:19 18:02-18:22/20	07:57 18:01 18:01	08:03 13:16-13:58/42 15:57	08:46 13:29-14:07/38 15:38
22	04:57 21:44	05:56 20:38	06:58 16:54-17:25/31 19:16 18:00-18:24/24	07:59 17:58 17:58	08:05 13:15-13:58/43 15:55	08:47 13:30-14:08/38 15:39
23	04:58 21:42	05:58 20:35	07:00 16:52-17:26/34 19:13 17:59-18:25/26	08:01 17:56 17:56	08:07 13:16-13:59/43 15:54	08:47 13:30-14:08/38 15:39
24	05:00 21:41	06:00 20:33	07:02 16:50-17:27/37 19:11 17:58-18:26/28	08:03 17:53 17:53	08:09 13:16-13:59/43 15:52	08:48 13:31-14:08/37 15:40
25	05:02 21:39	06:02 20:30	07:04 16:48-17:28/40 19:08 17:57-18:26/29	07:05 16:48 16:51	08:11 13:16-14:00/44 15:51	08:48 13:31-14:09/38 15:40
26	05:03 21:37	06:04 20:28	07:06 16:47-17:29/42 19:05 17:56-18:26/30	07:08 16:48 16:48	08:13 13:17-14:00/43 15:50	08:48 13:32-14:10/38 15:41
27	05:05 21:35	06:06 20:25	07:08 16:46-17:29/43 19:03 17:56-18:26/30	07:10 16:46 16:46	08:15 13:17-14:00/43 15:48	08:48 13:32-14:11/39 15:42
28	05:07 21:33	06:08 20:22	07:10 16:44-17:30/46 19:00 17:54-18:25/31	07:12 16:44 16:44	08:17 13:17-14:00/43 15:47	08:49 13:33-14:11/38 15:43
29	05:09 21:32	06:10 20:20	07:12 16:43-17:30/47 18:57 17:52-18:25/33	07:14 16:41 16:41	08:18 13:17-14:00/43 15:46	08:49 13:32-14:11/39 15:44
30	05:11 21:30	06:12 20:17	07:14 16:43-17:30/47 18:55 17:51-18:24/33	07:16 16:39 16:39	08:20 13:18-14:01/43 15:45	08:49 13:33-14:12/39 15:45
31	05:13 21:28	06:14 20:15		07:18 16:37		08:48 13:33-14:13/40 15:46
Potential sun hours	528	469	384	324	248	217
Sum of minutes with flicker	0	0	733	979	882	1221

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: DD3 - VESTAS V172-7.2 7200 172.0 !O! hub: 175,0 m (TOT: 261,0 m) (24)

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 12:51-13:33/42 15:47 11:19-11:54/35	08:13 12:50-13:55/65 16:44 15:17-15:34/17	07:09 16:04-16:56/52 17:46	06:47 19:51	05:31 20:53	04:35 21:50
2	08:48 12:51-13:34/43 15:48 11:20-11:55/35	08:11 12:50-13:55/65 16:46 15:19-15:33/14	07:06 16:04-16:56/52 17:48	06:45 19:53	05:29 20:55	04:34 21:51
3	08:48 12:51-13:35/44 15:50 11:20-11:54/34	08:09 12:51-13:56/65 16:48 15:21-15:32/11	07:04 16:05-16:56/51 17:50	06:42 19:55	05:27 20:57	04:33 21:53
4	08:47 12:51-13:36/45 15:51 11:21-11:55/34	08:07 12:51-13:56/65 16:51	07:01 16:05-16:55/50 17:53	06:39 19:57	05:24 20:59	04:32 21:54
5	08:47 12:51-13:37/46 15:52 11:22-11:55/33	08:05 12:51-13:55/64 16:53	06:59 16:06-16:53/47 17:55	06:37 19:59	05:22 21:01	04:31 21:55
6	08:46 12:51-13:38/47 15:54 11:22-11:55/33	08:03 12:51-13:55/64 16:55	06:56 16:08-16:53/45 17:57	06:34 20:02	05:20 21:03	04:30 21:57
7	08:46 12:50-13:39/49 15:55 11:23-11:55/32	08:01 12:52-13:55/63 16:57	06:53 16:10-16:51/41 17:59	06:31 20:04	05:18 21:06	04:29 21:58
8	08:45 12:50-13:39/49 15:57 11:24-11:55/31	07:58 12:52-13:54/62 17:00	06:51 16:12-16:27/15 18:01	06:29 20:06	05:16 21:08	04:28 21:59
9	08:44 12:50-13:40/50 15:58 11:25-11:55/30	07:56 12:53-13:54/61 17:02	06:48 16:34-16:46/12 18:03	06:26 20:08	05:14 21:10	04:28 22:00
10	08:44 12:50-13:41/51 15:17-15:19/2 16:00 11:25-11:55/30	07:54 12:54-13:54/60 17:04	06:46 16:19-16:34/15 18:05	06:23 20:10	05:11 21:12	04:27 22:01
11	08:43 12:50-13:42/52 15:15-15:21/6 16:02 11:27-11:55/28	07:52 12:54-13:53/59 17:06	06:43 16:19-16:37/18 18:07	06:21 20:12	05:09 21:13	04:26 22:02
12	08:42 12:50-13:44/54 15:14-15:23/9 16:04 11:28-11:55/27	07:50 12:55-13:53/58 17:09	06:40 16:19-16:37/18 18:10	06:18 20:14	05:07 21:15	04:26 22:03
13	08:41 12:50-13:45/55 15:14-15:26/12 16:05 11:29-11:55/26	07:47 12:56-13:52/56 17:11	06:38 16:14-16:40/26 18:12	06:16 20:16	05:05 21:17	04:26 22:03
14	08:40 12:50-13:45/55 15:13-15:27/14 16:07 11:30-11:54/24	07:45 12:57-13:51/54 17:13	06:35 16:14-16:40/26 18:14	06:13 20:18	05:03 21:19	04:25 22:04
15	08:39 12:50-13:46/56 15:12-15:29/17 16:09 11:32-11:53/21	07:43 12:58-13:50/52 17:15	06:32 16:12-16:43/31 18:16	06:11 20:20	05:01 21:21	04:25 22:05
16	08:38 12:50-13:47/57 15:12-15:30/18 16:11 11:34-11:53/19	07:41 12:59-13:48/49 17:17	06:30 16:10-16:45/35 18:18	06:08 20:22	05:00 21:23	04:25 22:05
17	08:36 12:50-13:48/58 15:12-15:32/20 16:13 11:35-11:51/16	07:38 13:01-13:47/46 17:20	06:27 16:09-16:46/37 18:20	06:05 20:24	04:58 21:25	04:24 22:06
18	08:35 12:49-13:48/59 15:11-15:32/21 16:15 11:39-11:49/10	07:36 13:02-13:45/43 17:22	06:25 16:07-16:47/40 18:22	06:03 20:26	04:56 21:27	04:24 22:06
19	08:34 12:50-13:49/59 16:17 15:12-15:34/22	07:34 13:05-13:44/39 17:24	06:22 17:50-17:56/6 18:24	06:00 20:28	04:54 21:29	04:24 22:07
20	08:32 12:49-13:50/61 16:19 15:11-15:34/23	07:31 13:07-13:41/34 17:26	06:19 17:47-17:58/11 18:26	05:58 20:31	04:52 21:31	04:24 22:07
21	08:31 12:50-13:51/61 16:21 15:11-15:34/23	07:29 13:10-13:39/29 17:29	06:17 17:45-18:00/15 18:28	05:55 20:33	04:51 21:32	04:25 22:07
22	08:30 12:50-13:51/61 16:23 15:12-15:36/24	07:26 13:14-13:34/20 17:31	06:14 17:45-18:03/18 18:30	05:53 20:35	04:49 21:34	04:25 22:08
23	08:28 12:49-13:52/63 16:25 15:12-15:36/24	07:24 16:04-16:55/51 17:33	06:11 17:43-18:04/21 18:33	05:50 20:37	04:47 21:36	04:25 22:08
24	08:27 12:49-13:52/63 16:27 15:12-15:36/24	07:21 16:03-16:56/53 17:35	06:09 17:42-18:03/21 18:35	05:48 20:39	04:46 21:38	04:25 22:08
25	08:25 12:49-13:53/64 16:29 15:12-15:36/24	07:19 16:03-16:56/53 17:37	06:06 17:43-18:04/21 18:37	05:46 20:41	04:44 21:39	04:26 22:08
26	08:23 12:49-13:53/64 16:31 15:12-15:36/24	07:16 16:03-16:57/54 17:40	06:03 17:42-18:03/21 18:39	05:43 20:43	04:43 21:41	04:26 22:08
27	08:22 12:49-13:53/64 16:33 15:12-15:36/24	07:14 16:03-16:56/53 17:42	06:01 17:42-18:02/20 18:41	05:41 20:45	04:41 21:43	04:27 22:08
28	08:20 12:49-13:54/65 16:35 15:13-15:36/23	07:11 16:04-16:57/53 17:44	05:58 17:43-18:02/19 18:43	05:38 20:47	04:40 21:44	04:27 22:07
29	08:18 12:49-13:54/65 16:37 15:14-15:36/22		06:55 18:43-19:00/17 19:45	05:36 20:49	04:39 21:46	04:28 22:07
30	08:16 12:49-13:54/65 16:40 15:15-15:36/21		06:53 18:44-18:58/14 19:47	05:34 20:51	04:37 21:47	04:28 22:07
31	08:14 12:50-13:55/65 16:42 15:16-15:35/19		06:50 18:47-18:56/9 19:49		04:36 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	2646	1959	598	0	0	0

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

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



Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: DD3 - VESTAS V172-7.2 7200 172.0 !O! hub: 175,0 m (TOT: 261,0 m) (24)

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	05:15 21:26	06:16 20:12	07:16 18:52	07:20 12:23-13:24/61 16:35 15:51-16:01/10	08:22 12:32-13:25/53 14:57-15:03/6 15:44 11:09-11:37/28
2	04:30 22:06	05:16 21:24	06:18 20:09	07:18 18:49	07:23 12:22-13:24/62 16:32 15:52-15:58/6	08:24 12:33-13:25/52 15:00-15:02/2 15:43 11:09-11:38/29
3	04:31 22:05	05:18 21:21	06:20 20:07	07:20 18:47	07:25 12:21-13:24/63 16:30	08:25 12:34-13:25/51 15:42 11:09-11:39/30
4	04:32 22:05	05:20 21:19	06:22 20:04	07:22 17:13-17:22/9 18:44	07:27 12:22-13:25/63 16:28	08:27 12:35-13:25/50 15:41 11:09-11:40/31
5	04:33 22:04	05:22 21:17	06:24 20:02	07:24 17:09-17:25/16 18:41 16:51-17:02/11	07:29 12:21-13:25/64 16:26	08:28 12:35-13:24/49 15:41 11:08-11:40/32
6	04:34 22:03	05:24 21:15	06:26 19:59	07:26 16:47-17:26/39 18:39	07:31 12:21-13:26/65 16:24	08:30 12:37-13:24/47 15:40 11:08-11:41/33
7	04:35 22:03	05:26 21:13	06:28 19:56	07:28 16:44-17:27/43 18:36	07:33 12:21-13:25/64 16:22 14:55-14:58/3	08:31 12:38-13:24/46 15:39 11:09-11:42/33
8	04:36 22:02	05:28 21:11	06:30 19:54	07:30 16:42-17:28/46 18:34	07:36 12:20-13:25/65 16:20 14:51-15:02/11	08:33 12:38-13:24/46 15:39 11:09-11:42/33
9	04:37 22:01	05:30 21:09	06:32 19:51	07:32 16:41-17:30/49 18:31	07:38 12:21-13:26/65 16:18 14:49-15:04/15	08:34 12:40-13:24/44 15:38 11:09-11:44/35
10	04:38 22:00	05:32 21:06	06:34 19:48	07:34 16:40-17:30/50 18:28	07:40 12:21-13:26/65 16:16 14:48-15:05/17	08:35 12:40-13:24/44 15:38 11:09-11:44/35
11	04:40 21:59	05:34 21:04	06:36 19:46	07:36 16:38-17:30/52 18:26	07:42 12:21-13:27/66 16:14 14:47-15:07/20	08:37 12:42-13:24/42 15:38 11:10-11:45/35
12	04:41 21:58	05:36 21:02	06:38 18:38-18:47/9 19:43	07:38 16:37-17:30/53 18:23	07:44 12:21-13:26/65 16:12 14:46-15:07/21	08:38 12:42-13:24/42 15:37 11:10-11:45/35
13	04:42 21:57	05:38 20:59	06:40 18:36-18:49/13 19:40	07:40 16:36-17:29/53 18:21	07:46 12:21-13:26/65 16:10 14:46-15:08/22	08:39 12:43-13:24/41 15:37 11:10-11:46/36
14	04:44 21:55	05:40 20:57	06:42 18:34-18:50/16 19:38	07:42 16:36-17:29/53 18:18	07:48 12:22-13:27/65 16:08 14:46-15:09/23	08:40 12:43-13:24/41 15:37 11:10-11:46/36
15	04:45 21:54	05:42 20:55	06:44 18:32-18:51/19 19:35	07:44 16:36-17:29/53 18:15	07:51 12:22-13:26/64 16:06 14:45-15:09/24	08:41 12:44-13:24/40 15:37 11:11-11:46/35
16	04:47 21:53	05:44 20:52	06:46 18:31-18:51/20 19:32	07:46 16:35-17:29/54 18:13	07:53 12:22-13:26/64 16:05 14:45-15:09/24	08:42 12:45-13:24/39 15:37 11:11-11:47/36
17	04:48 21:51	05:46 20:50	06:48 18:31-18:51/20 19:30	07:48 16:35-17:28/53 18:10	07:55 12:23-13:27/64 16:03 14:46-15:10/24	08:43 12:46-13:24/38 15:37 11:11-11:48/37
18	04:50 21:50	05:48 20:47	06:50 18:30-18:51/21 19:27	07:51 16:35-17:27/52 18:08	07:57 12:23-13:26/63 16:01 14:46-15:10/24	08:44 12:46-13:25/39 15:37 11:12-11:48/36
19	04:52 21:49	05:50 20:45	06:52 18:30-18:51/21 19:24	07:53 13:51-14:01/10 18:05 16:36-17:25/49	07:59 12:23-13:26/63 16:00 14:46-15:10/24	08:45 12:47-13:25/38 15:37 11:13-11:49/36
20	04:53 21:47	05:52 20:43	06:54 18:30-18:50/20 19:21	07:55 13:44-14:07/23 18:03 16:35-17:25/50	08:01 12:25-13:26/61 15:58 14:47-15:11/24	08:45 12:47-13:25/38 15:38 11:13-11:49/36
21	04:55 21:45	05:54 20:40	06:56 18:30-18:49/19 19:19	07:57 13:40-14:10/30 18:00 16:36-17:23/47	08:03 12:25-13:26/61 15:57 14:47-15:10/23	08:46 12:48-13:26/38 15:38 11:13-11:50/37
22	04:56 21:44	05:56 20:38	06:57 18:31-18:46/15 19:16	07:59 13:36-14:12/36 17:58 16:36-17:21/45	08:05 12:25-13:26/61 15:55 14:47-15:10/23	08:47 12:48-13:26/38 15:39 11:14-11:51/37
23	04:58 21:42	05:58 20:35	06:59 18:31-18:43/12 19:13	08:01 13:34-14:15/41 17:56 16:37-17:19/42	08:07 12:26-13:25/59 15:54 14:48-15:10/22	08:47 12:49-13:27/38 15:39 11:14-11:51/37
24	05:00 21:41	06:00 20:33	07:01 18:33-18:41/8 19:11	08:03 13:32-14:16/44 17:53 16:38-17:17/39	08:09 12:27-13:26/59 14:49-15:10/21 15:52 11:16-11:26/10	08:47 12:49-13:27/38 15:40 11:15-11:51/36
25	05:02 21:39	06:02 20:30	07:03 18:37-18:38/1 19:08	07:05 12:30-13:17/47 16:51 15:39-16:15/36	08:11 12:28-13:26/58 14:50-15:10/20 15:51 11:13-11:29/16	08:48 12:49-13:28/39 15:40 11:15-11:51/36
26	05:03 21:37	06:04 20:28	07:05 19:05	07:08 12:29-13:19/50 16:48 15:41-16:15/34	08:13 12:28-13:25/57 14:51-15:10/19 15:50 11:12-11:31/19	08:48 12:51-13:29/38 15:41 11:16-11:52/36
27	05:05 21:35	06:06 20:25	07:07 19:03	07:10 12:27-13:20/53 16:46 15:42-16:12/30	08:15 12:29-13:25/56 14:52-15:09/17 15:48 11:11-11:32/21	08:48 12:51-13:30/39 15:42 11:17-11:53/36
28	05:07 21:33	06:08 20:22	07:09 19:00	07:12 12:26-13:20/54 16:44 15:45-16:08/23	08:16 12:30-13:25/55 14:53-15:07/14 15:47 11:10-11:34/24	08:48 12:51-13:31/40 15:43 11:17-11:53/36
29	05:09 21:31	06:10 20:20	07:11 18:57	07:14 12:26-13:22/56 16:41 15:48-16:08/20	08:18 12:30-13:25/55 14:54-15:06/12 15:46 11:09-11:35/26	08:49 12:50-13:30/40 15:44 11:17-11:53/36
30	05:11 21:30	06:12 20:17	07:14 18:55	07:16 12:24-13:22/58 16:39 15:48-16:06/18	08:20 12:31-13:25/54 14:55-15:04/9 15:45 11:09-11:36/27	08:49 12:51-13:31/40 15:45 11:18-11:53/35
31	05:13 21:28	06:14 20:15		07:18 12:23-13:23/60 16:37 15:49-16:03/14		08:48 12:51-13:33/42 15:46 11:19-11:54/35
Potential sun hours	528	469	384	324	248	217
Sum of minutes with flicker	0	0	214	1695	2467	2392

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: JV1 - VESTAS V172-7.2 7200 172.0 !O! hub: 175,0 m (TOT: 261,0 m) (26)  
 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 14:16-14:40/24 15:47	08:13 16:44 08:11 17:46	07:09 17:46 07:06 19:51	06:47 19:51 06:45 19:53	05:31 18:38-19:11/33 20:53	04:35 21:50
2	08:48 14:17-14:41/24 15:49	08:11 16:46 08:09 17:48	07:04 17:48 07:04 19:53	06:42 18:57-19:04/7 19:55	05:29 18:39-19:10/31 20:55	04:34 21:51
3	08:48 14:17-14:41/24 15:50	08:09 16:49 08:07 17:50	07:04 17:50 06:59 19:55	06:42 18:57-19:04/7 19:55	05:27 18:41-19:08/27 20:57	04:33 21:53
4	08:47 14:18-14:42/24 15:51	08:07 16:51 08:05 17:53	07:01 17:53 06:59 19:59	06:39 18:51-19:09/18 19:57	05:25 18:43-19:06/23 20:59	04:32 21:54
5	08:47 14:19-14:42/23 15:53	08:05 16:53 08:03 17:55	06:59 17:55 06:56 19:59	06:37 18:48-19:12/24 19:59	05:22 18:45-19:04/19 21:01	04:31 21:55
6	08:46 14:19-14:42/23 15:54	08:03 16:55 08:01 17:57	06:56 17:57 06:54 19:59	06:34 18:45-19:14/29 20:02	05:20 18:49-19:01/12 21:03	04:30 21:57
7	08:46 14:19-14:42/23 15:55	08:01 16:54 08:00 17:59	06:54 17:59 06:51 19:59	06:31 18:43-19:16/33 20:04	05:18 18:43-19:16/33 21:06	04:29 21:58
8	08:45 14:20-14:42/22 15:57	07:58 16:57 07:56 18:01	06:51 18:01 06:48 19:59	06:29 18:41-19:17/36 20:06	05:16 18:41-19:17/36 21:08	04:28 21:59
9	08:44 14:21-14:43/22 15:59	07:56 17:02 07:54 18:03	06:48 18:03 06:46 19:59	06:26 18:39-19:17/38 20:08	05:14 18:39-19:17/38 21:10	04:28 22:00
10	08:44 14:22-14:43/21 16:00	07:54 17:04 07:52 18:05	06:46 18:05 06:43 19:59	06:24 18:39-19:18/39 20:10	05:12 18:39-19:18/39 21:12	04:27 22:01
11	08:43 14:22-14:43/21 16:02	07:52 17:06 07:50 18:07	06:43 18:07 06:40 19:59	06:21 18:37-19:19/42 20:12	05:09 18:37-19:19/42 21:13	04:27 22:02
12	08:42 14:24-14:43/19 16:04	07:50 17:09 07:47 18:10	06:40 18:10 06:38 19:59	06:18 18:36-19:20/44 20:14	05:07 18:36-19:20/44 21:15	04:26 22:03
13	08:41 14:25-14:43/18 16:05	07:47 17:11 07:45 18:12	06:38 18:12 06:35 19:59	06:16 18:35-19:19/44 20:16	05:05 18:35-19:19/44 21:17	04:26 22:03
14	08:40 14:25-14:42/17 16:07	07:45 17:13 07:43 18:14	06:35 18:14 06:33 19:59	06:13 18:35-19:20/45 20:18	05:03 18:35-19:20/45 21:19	04:25 22:04
15	08:39 14:27-14:42/15 16:09	07:43 17:15 07:41 18:16	06:33 18:16 06:30 19:59	06:11 18:34-19:20/46 20:20	05:02 18:34-19:20/46 21:21	04:25 22:05
16	08:38 14:29-14:41/12 16:11	07:41 17:18 07:38 18:18	06:30 18:18 06:27 19:59	06:08 18:34-19:20/46 20:22	05:00 18:34-19:20/46 21:23	04:25 22:05
17	08:36 14:31-14:40/9 16:13	07:38 17:20 07:36 18:20	06:27 18:20 06:25 19:59	06:05 18:33-19:20/47 20:24	04:58 18:33-19:20/47 21:25	04:25 22:06
18	08:35 16:15 16:15	07:36 17:22 07:34 18:22	06:25 18:22 06:22 19:59	06:03 18:33-19:20/47 20:26	04:56 18:33-19:20/47 21:27	04:25 22:06
19	08:34 16:17 16:17	07:34 17:24 07:31 18:24	06:22 18:24 06:19 19:59	06:00 18:32-19:19/47 20:28	04:54 18:32-19:19/47 21:29	04:24 22:07
20	08:32 16:19 16:19	07:31 17:26 07:29 18:26	06:19 18:26 06:17 19:59	05:58 18:32-19:19/47 20:31	04:52 18:32-19:19/47 21:31	04:25 22:07
21	08:31 16:21 16:21	07:29 17:29 07:26 18:28	06:17 18:28 06:14 19:59	05:55 18:33-19:19/46 20:33	04:51 18:33-19:19/46 21:32	04:25 22:07
22	08:30 16:23 16:23	07:26 17:31 07:24 18:31	06:14 18:31 06:11 19:59	05:53 18:32-19:18/46 20:35	04:49 18:32-19:18/46 21:34	04:25 22:08
23	08:28 16:25 16:25	07:24 17:33 07:21 18:33	06:11 18:33 06:09 19:59	05:50 18:33-19:18/45 20:37	04:47 18:33-19:18/45 21:36	04:25 22:08
24	08:27 16:27 16:27	07:21 17:35 07:19 18:35	06:09 18:35 06:06 19:59	05:48 18:33-19:18/45 20:39	04:46 18:33-19:18/45 21:38	04:25 22:08
25	08:25 16:29 16:29	07:19 17:37 07:16 18:37	06:06 18:37 06:03 19:59	05:46 18:33-19:16/43 20:41	04:44 18:33-19:16/43 21:39	04:26 22:08
26	08:23 16:31 16:31	07:16 17:40 07:14 18:39	06:03 18:39 06:01 19:59	05:43 18:34-19:16/42 20:43	04:43 18:34-19:16/42 21:41	04:26 22:08
27	08:22 16:33 16:33	07:14 17:42 07:11 18:41	06:01 18:41 05:58 19:59	05:41 18:34-19:15/41 20:45	04:41 18:34-19:15/41 21:43	04:27 22:08
28	08:20 16:35 16:35	07:11 17:44 07:08 18:43	05:58 18:43 05:55 19:59	05:38 18:35-19:15/40 20:47	04:40 18:35-19:15/40 21:44	04:27 22:07
29	08:18 16:38 16:38	07:08 17:44 07:06 18:43	05:55 18:43 05:53 19:59	05:36 18:35-19:13/38 20:49	04:39 18:35-19:13/38 21:46	04:28 22:07
30	08:16 16:40 16:40	07:06 17:44 07:04 18:43	05:53 18:43 05:50 19:59	05:34 18:37-19:12/35 20:51	04:37 18:37-19:12/35 21:47	04:29 22:07
31	08:14 16:42 16:42	07:04 17:44 07:02 18:43	05:50 18:43 05:47 19:59	05:32 18:37-19:12/35 20:53	04:35 18:37-19:12/35 21:49	04:29 22:07
Potential sun hours						
Sum of minutes with flicker						
	236	266	366	426	507	528
	341	0	0	1100	145	0

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

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



Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: JV1 - VESTAS V172-7.2 7200 172.0 !O! hub: 175,0 m (TOT: 261,0 m) (26)

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	05:15 21:26	06:16 20:12	18:36-19:17/41	07:16 18:52	07:21 16:35	08:22 15:44	14:05-14:25/20
2	04:30 22:06	05:17 21:24	06:18 20:09	18:36-19:16/40	07:18 18:49	07:23 16:33	08:23 15:43	14:05-14:26/21
3	04:31 22:05	05:18 21:22	06:20 20:07	18:37-19:15/38	07:20 18:47	07:25 16:30	08:25 15:42	14:05-14:27/22
4	04:32 22:05	05:20 21:19	06:22 20:04	18:38-19:14/36	07:22 18:44	07:27 16:28	08:27 15:41	14:05-14:27/22
5	04:33 22:04	05:22 21:17	06:24 20:02	18:39-19:12/33	07:24 18:41	07:29 16:26	08:28 15:41	14:05-14:27/22
6	04:34 22:03	05:24 21:15	06:26 19:59	18:41-19:10/29	07:26 18:39	07:31 16:24	08:30 15:40	14:05-14:28/23
7	04:35 22:03	05:26 21:13	06:28 19:56	18:43-19:07/24	07:28 18:36	07:34 16:22	08:31 15:39	14:06-14:29/23
8	04:36 22:02	05:28 21:11	06:30 19:54	18:46-19:04/18	07:30 18:34	07:36 16:20	08:33 15:39	14:05-14:29/24
9	04:37 22:01	05:30 21:09	06:32 19:51	18:50-18:59/9	07:32 18:31	07:38 16:18	08:34 15:38	14:06-14:30/24
10	04:39 22:00	05:32 21:06	06:34 19:48		07:34 18:28	07:40 16:16	08:35 15:38	14:06-14:30/24
11	04:40 21:59	05:34 21:04	06:36 19:46		07:36 18:26	07:42 16:14	08:37 15:38	14:07-14:31/24
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	14:07-14:32/25
13	04:43 21:57	05:38 20:59	06:40 19:40		07:40 18:21	07:46 16:10	08:39 15:37	14:07-14:32/25
14	04:44 21:55	05:40 20:57	06:42 19:38		07:42 18:18	07:48 16:08	08:40 15:37	14:08-14:32/24
15	04:45 21:54	05:42 20:55	06:44 19:35		07:44 18:16	07:51 16:07	08:41 15:37	14:08-14:32/24
16	04:47 21:53	05:44 20:52	06:46 19:32		07:46 18:13	07:53 16:05	08:42 15:37	14:09-14:33/24
17	04:48 21:51	05:46 20:50	06:48 19:30		07:48 18:10	07:55 16:03	08:43 15:37	14:09-14:34/25
18	04:50 21:50	05:48 20:47	06:50 19:27		07:51 18:08	07:57 16:01	08:44 15:37	14:10-14:34/24
19	04:52 21:49	05:50 20:45	06:52 19:24		07:53 18:05	07:59 16:00	08:45 15:37	14:10-14:35/25
20	04:53 21:47	05:52 20:43	06:54 19:21		07:55 18:03	08:01 15:58	08:45 15:38	14:10-14:35/25
21	04:55 21:45	05:54 20:40	06:56 19:19		07:57 18:01	08:03 15:57	08:46 15:38	14:11-14:36/25
22	04:57 21:44	05:56 20:38	06:58 19:16		07:59 17:58	08:05 15:55	08:47 15:39	14:11-14:36/25
23	04:58 21:42	05:58 20:35	07:00 19:13		08:01 17:56	08:07 15:54	08:47 15:39	14:12-14:37/25
24	05:00 21:41	06:00 20:33	07:02 19:11		08:03 17:53	08:09 15:52	08:47 15:40	14:12-14:37/25
25	05:02 21:39	06:02 20:30	07:04 19:08		07:05 16:51	08:11 15:51	08:48 15:40	14:13-14:37/24
26	05:04 21:37	06:04 20:28	07:06 19:05		07:08 16:49	08:13 15:50	08:48 15:41	14:14-14:38/24
27	05:05 21:35	06:06 20:25	07:08 19:03		07:10 16:46	08:15 15:48	08:48 15:42	14:14-14:39/25
28	05:07 21:33	06:08 20:22	07:10 19:00		07:12 16:44	08:16 15:47	08:48 15:43	14:15-14:39/24
29	05:09 21:31	06:10 20:20	07:12 18:57		07:14 16:42	08:18 15:46	08:49 15:44	14:14-14:39/25
30	05:11 21:30	06:12 20:17	07:14 18:55		07:16 16:39	08:20 15:45	08:49 15:45	14:15-14:39/24
31	05:13 21:28	06:14 20:15			07:18 16:37		08:48 15:46	14:16-14:40/24
Potential sun hours	528	469	384	324	248	217		
Sum of minutes with flicker	0	991	268	0	90	740		

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: JU1 - VESTAS V172-7.2 7200 172.0 !OI hub: 175,0 m (TOT: 261,0 m) (32)

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	13:07-13:33/26	11:17-11:24/7	08:13	07:09	06:47	05:31	04:34
	15:47	10:12-10:45/33	11:36-12:07/31	16:43	17:46	19:51	20:53	21:50
2	08:48	13:07-13:33/26	11:37-12:07/30	08:11	07:06	06:44	05:28	04:33
	15:48	10:12-10:44/32		16:46	17:48	19:53	20:55	21:52
3	08:48	13:09-13:33/24	11:38-12:07/29	08:09	07:04	06:42	05:26	04:32
	15:49	10:13-10:45/32		16:48	17:50	19:55	20:57	21:53
4	08:47	13:09-13:33/24	11:38-12:07/29	08:07	07:01	06:39	05:24	04:31
	15:50	10:13-10:44/31		16:50	17:52	19:57	20:59	21:54
5	08:47	13:10-13:33/23	11:39-12:07/28	08:05	06:58	06:36	05:22	04:30
	15:52	10:14-10:43/29		16:52	17:54	19:59	21:01	21:55
6	08:46	13:12-13:33/21	11:40-12:08/28	08:03	06:56	06:34	05:19	04:29
	15:53	10:15-10:43/28		16:55	17:56	20:01	21:03	21:57
7	08:46	13:13-13:33/20	11:41-12:07/26	08:00	06:53	06:31	05:17	04:28
	15:55	10:16-10:38/22		16:57	17:59	20:03	21:06	21:58
8	08:45	13:14-13:33/19	11:42-12:07/25	07:58	06:51	06:28	05:15	04:28
	15:56	10:17-10:38/21		16:59	18:01	20:05	21:08	21:59
9	08:45	13:15-13:32/17	11:43-12:07/24	07:56	06:48	06:26	05:13	04:27
	15:58	10:18-10:38/20		17:01	18:03	20:08	21:10	22:00
10	08:44	13:17-13:31/14	11:45-12:07/22	07:54	06:45	06:23	05:11	04:26
	15:59	10:19-10:38/19		17:04	18:05	20:10	21:12	22:01
11	08:43	13:18-13:29/11	11:45-12:05/20	07:52	06:43	06:20	05:09	04:26
	16:01	10:20-10:38/18		17:06	18:07	20:12	21:14	22:02
12	08:42	13:21-13:28/7	11:47-12:05/18	07:50	06:40	06:18	05:07	04:25
	16:03	10:20-10:36/16		17:08	18:09	20:14	21:15	22:03
13	08:41	10:22-10:36/14		07:47	06:38	06:15	05:05	04:25
	16:05	11:49-12:04/15		17:10	18:11	20:16	21:17	22:04
14	08:40	10:24-10:35/11		07:45	06:35	06:13	05:03	04:24
	16:06	11:52-12:02/10		17:13	18:13	20:18	21:19	22:04
15	08:39	10:26-10:33/7		07:43	06:32	06:10	05:01	04:24
	16:08			17:15	18:16	20:20	21:21	22:05
16	08:38			07:40	06:30	06:08	04:59	04:24
	16:10			17:17	18:18	20:22	21:23	22:06
17	08:36			07:38	06:27	06:05	04:57	04:24
	16:12			17:19	18:20	20:24	21:25	22:06
18	08:35			07:36	06:24	06:02	04:55	04:24
	16:14			17:21	18:22	20:26	21:27	22:07
19	08:34			07:33	06:22	06:00	04:53	04:24
	16:16			17:24	18:24	20:28	21:29	22:07
20	08:33			07:31	06:19	05:57	04:52	04:24
	16:18			17:26	18:26	20:30	21:31	22:07
21	08:31			07:29	06:16	05:55	04:50	04:24
	16:20			17:28	18:28	20:32	21:32	22:08
22	08:30			07:26	06:14	05:52	04:48	04:24
	16:22			17:30	18:30	20:35	21:34	22:08
23	08:28			07:24	06:11	05:50	04:47	04:24
	16:24			17:33	18:32	20:37	21:36	22:08
24	08:27			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	06:06	05:45	04:44	04:25
	16:28			17:37	18:36	20:41	21:39	22:08
26	08:23			07:16	06:03	05:43	04:42	04:25
	16:30			17:39	18:39	20:43	21:41	22:08
27	08:22			07:14	06:00	05:40	04:41	04:26
	16:33			17:41	18:41	20:45	21:43	22:08
28	08:20			07:11	05:58	05:38	04:39	04:26
	16:35			17:43	18:43	20:47	21:44	22:08
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	05:33	04:37	04:28
	16:39				19:47	20:51	21:47	22:07
31	08:14				06:49		04:35	
	16:41				19:49		21:49	
Potential sun hours	236			266	366	426	507	528
Sum of minutes with flicker	907			0	0	0	0	0

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

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0037167242411

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Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: JU1 - VESTAS V172-7.2 7200 172.0 !O! hub: 175,0 m (TOT: 261,0 m) (32)  
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	08:22 13:00-13:11/11 11:27-11:47/20 15:43 10:01-10:19/18
2	04:29 22:06	05:16 21:24	06:17 20:09	07:17 18:49	07:23 16:32	08:24 12:59-13:13/14 11:27-11:49/22 15:42 10:01-10:20/19
3	04:30 22:06	05:18 21:22	06:19 20:07	07:19 18:46	07:25 16:30	08:25 12:58-13:15/17 11:26-11:50/24 15:42 10:01-10:21/20
4	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 16:28	08:27 12:58-13:17/19 11:26-11:51/25 15:41 10:01-10:22/21
5	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:41	07:29 16:25	08:28 12:58-13:18/20 11:26-11:52/26 15:40 10:01-10:23/22
6	04:33 22:04	05:24 21:15	06:25 19:59	07:25 18:38	07:31 16:23	08:30 12:57-13:18/21 11:26-11:53/27 15:39 10:00-10:28/28
7	04:34 22:03	05:26 21:13	06:27 19:56	07:27 18:36	07:33 16:21	08:31 12:57-13:20/23 11:26-11:54/28 15:39 10:01-10:30/29
8	04:35 22:02	05:28 21:11	06:29 19:53	07:30 18:33	07:36 16:19	08:33 12:58-13:21/23 11:26-11:55/29 15:38 10:02-10:32/30
9	04:37 22:01	05:29 21:09	06:31 19:51	07:32 18:31	07:38 16:17	08:34 12:57-13:21/24 11:26-11:55/29 15:38 10:01-10:33/32
10	04:38 22:00	05:31 21:06	06:33 19:48	07:34 18:28	07:40 16:15	08:36 12:58-13:23/25 11:27-11:57/30 15:37 10:02-10:35/33
11	04:39 21:59	05:33 21:04	06:35 19:45	07:36 18:25	07:42 16:13	08:37 12:57-13:23/26 11:08-11:14/6 15:37 10:02-10:35/33 11:26-11:57/31
12	04:40 21:58	05:35 21:02	06:37 19:43	07:38 18:23	07:44 16:11	08:38 12:57-13:23/26 11:06-11:15/9 15:37 10:02-10:36/34 11:26-11:57/31
13	04:42 21:57	05:37 20:59	06:39 19:40	07:40 18:20	07:46 16:09	08:39 12:57-13:24/27 11:06-11:16/10 15:36 10:03-10:37/34 11:26-11:58/32
14	04:43 21:56	05:39 20:57	06:41 19:37	07:42 18:18	07:48 16:08	08:40 12:58-13:25/27 11:06-11:18/12 15:36 10:03-10:38/35 11:28-11:59/31
15	04:45 21:54	05:41 20:55	06:43 19:35	07:44 18:15	07:51 16:06	08:41 12:59-13:26/27 11:06-11:19/13 15:36 10:04-10:39/35 11:28-12:00/32
16	04:46 21:53	05:43 20:52	06:45 19:32	07:46 18:13	07:53 16:04	08:42 12:59-13:26/27 11:06-11:20/14 15:36 10:04-10:39/35 11:28-12:00/32
17	04:48 21:52	05:45 20:50	06:47 19:29	07:48 18:10	07:55 16:02	08:43 12:59-13:27/28 11:06-11:21/15 15:36 10:05-10:40/35 11:29-12:01/32
18	04:49 21:50	05:47 20:47	06:49 19:27	07:50 18:07	07:57 16:01	08:44 12:59-13:27/28 11:06-11:21/15 15:36 10:04-10:40/36 11:28-12:01/33
19	04:51 21:49	05:49 20:45	06:51 19:24	07:52 18:05	07:59 15:59	08:45 13:00-13:28/28 11:06-11:22/16 15:37 10:05-10:40/35 11:29-12:01/32
20	04:52 21:47	05:51 20:42	06:53 19:21	07:55 18:03	08:01 15:57	08:46 13:00-13:28/28 11:07-11:23/16 15:37 10:06-10:41/35 11:30-12:02/32
21	04:54 21:46	05:53 20:40	06:55 19:18	07:57 18:00	08:03 15:56	08:46 13:00-13:28/28 11:07-11:23/16 15:37 10:06-10:41/35 11:29-12:02/33
22	04:56 21:44	05:55 20:38	06:57 19:16	07:59 17:58	08:05 15:54	08:47 13:01-13:29/28 11:08-11:24/16 15:38 10:07-10:42/35 11:30-12:03/33
23	04:58 21:42	05:57 20:35	06:59 19:13	08:01 17:55	08:07 15:53	08:47 13:01-13:29/28 11:08-11:24/16 15:38 10:07-10:42/35 11:31-12:03/32
24	04:59 21:41	05:59 20:32	07:01 19:10	08:03 17:53	08:09 15:52	08:48 13:02-13:30/28 11:09-11:25/16 15:39 10:08-10:43/35 11:32-12:04/32
25	05:01 21:39	06:01 20:30	07:03 19:08	07:05 16:50	08:11 15:50	08:48 13:03-13:31/28 11:10-11:25/15 15:40 10:08-10:44/36 11:32-12:05/33
26	05:03 21:37	06:03 20:27	07:05 19:05	07:07 16:48	08:13 15:49	08:48 13:03-13:31/28 11:10-11:25/15 15:40 10:08-10:44/36 11:32-12:05/33
27	05:05 21:35	06:05 20:25	07:07 19:02	07:10 16:46	08:15 10:05-10:12/7 15:48	08:48 13:04-13:31/27 11:11-11:25/14 15:41 10:09-10:44/35 11:33-12:05/32
28	05:06 21:33	06:07 20:22	07:09 19:00	07:12 16:43	08:17 10:03-10:14/11 15:47 11:31-11:41/10	08:49 13:04-13:32/28 11:12-11:25/13 15:42 10:09-10:44/35 11:34-12:06/32
29	05:08 21:32	06:09 20:20	07:11 18:57	07:14 16:41	08:18 10:03-10:17/14 15:45 11:29-11:44/15	08:49 13:05-13:32/27 11:13-11:25/12 15:43 10:10-10:45/35 11:34-12:06/32
30	05:10 21:30	06:11 20:17	07:13 18:54	07:16 16:39	08:20 13:02-13:08/6 11:28-11:46/18 15:44 10:02-10:19/17	08:49 13:06-13:33/27 11:14-11:25/11 15:44 10:11-10:45/34 11:35-12:07/32
31	05:12 21:28	06:13 20:15		07:18 16:36		08:49 13:06-13:32/26 11:15-11:24/9 15:45 10:11-10:45/34 11:35-12:06/31
Potential sun hours	529	469	384	324	248	217
Sum of minutes with flicker	0	0	0	0	98	2968

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: O1.b - VESTAS V172-7.2 7200 172.0 !O! hub: 175,0 m (TOT: 261,0 m) (25)  
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 14:37-14:58/21 15:47	08:13 16:44	07:09 17:46	06:47 19:51	05:31 20:53	04:35 20:18-20:45/27 21:50
2	08:48 14:37-15:00/23 15:49	08:11 16:46	07:06 17:48	06:45 19:53	05:29 20:55	04:34 20:18-20:45/27 21:52
3	08:48 14:37-15:00/23 15:50	08:09 16:49	07:04 17:50	06:42 19:55	05:27 20:57	04:33 20:18-20:45/27 21:53
4	08:47 14:38-15:01/23 15:51	08:07 16:51	07:01 17:53	06:39 19:57	05:25 20:59	04:32 20:19-20:44/25 21:54
5	08:47 14:38-15:01/23 15:53	08:05 16:53	06:59 17:55	06:37 20:00	05:22 21:02	04:31 20:20-20:45/25 21:55
6	08:46 14:38-15:02/24 15:54	08:03 16:14-16:22/8 16:55	06:56 17:57	06:34 20:02	05:20 21:04	04:30 20:20-20:44/24 21:57
7	08:46 14:38-15:02/24 15:55	08:01 16:11-16:24/13 16:57	06:54 17:59	06:31 20:04	05:18 21:06	04:29 20:20-20:44/24 21:58
8	08:45 14:39-15:03/24 15:57	07:58 16:09-16:26/17 17:00	06:51 18:01	06:29 20:06	05:16 21:08	04:28 20:21-20:44/23 21:59
9	08:44 14:39-15:03/24 15:59	07:56 16:08-16:28/20 17:02	06:48 18:03	06:26 20:08	05:14 20:29-20:32/3 21:10	04:28 20:21-20:44/23 22:00
10	08:44 14:39-15:04/25 16:00	07:54 16:08-16:29/21 17:04	06:46 18:05	06:24 20:10	05:12 20:25-20:36/11 21:12	04:27 20:22-20:44/22 22:01
11	08:43 14:40-15:04/24 16:02	07:52 16:06-16:29/23 17:06	06:43 18:08	06:21 20:12	05:09 20:22-20:38/16 21:14	04:27 20:22-20:44/22 22:02
12	08:42 14:40-15:05/25 16:04	07:50 16:06-16:30/24 17:09	06:40 18:10	06:18 20:14	05:07 20:21-20:39/18 21:16	04:26 20:23-20:44/21 22:03
13	08:41 14:41-15:05/24 16:05	07:48 16:06-16:31/25 17:11	06:38 18:12	06:16 20:16	05:05 20:19-20:40/21 21:17	04:26 20:24-20:44/20 22:03
14	08:40 14:41-15:05/24 16:07	07:45 16:05-16:31/26 17:13	06:35 18:14	06:13 20:18	05:03 20:18-20:41/23 21:19	04:25 20:24-20:44/20 22:04
15	08:39 14:42-15:06/24 16:09	07:43 16:06-16:31/25 17:15	06:33 18:16	06:11 20:20	05:02 20:18-20:42/24 21:21	04:25 20:24-20:43/19 22:05
16	08:38 14:43-15:06/23 16:11	07:41 16:05-16:31/26 17:18	06:30 18:18	06:08 20:22	05:00 20:17-20:43/26 21:23	04:25 20:24-20:44/20 22:05
17	08:36 14:43-15:06/23 16:13	07:38 16:06-16:31/25 17:20	06:27 18:20	06:05 20:24	04:58 20:16-20:43/27 21:25	04:25 20:25-20:44/19 22:06
18	08:35 14:44-15:06/22 16:15	07:36 16:06-16:30/24 17:22	06:25 18:22	06:03 20:26	04:56 20:17-20:44/27 21:27	04:24 20:25-20:44/19 22:06
19	08:34 14:44-15:06/22 16:17	07:34 16:07-16:30/23 17:24	06:22 18:24	06:00 20:29	04:54 20:16-20:44/28 21:29	04:24 20:25-20:44/19 22:07
20	08:33 14:45-15:05/20 16:19	07:31 16:07-16:28/21 17:26	06:19 18:26	05:58 20:31	04:52 20:16-20:45/29 21:31	04:24 20:26-20:44/18 22:07
21	08:31 14:47-15:06/19 16:21	07:29 16:09-16:27/18 17:29	06:17 18:28	05:55 20:33	04:51 20:15-20:44/29 21:32	04:25 20:27-20:45/18 22:07
22	08:30 14:48-15:05/17 16:23	07:26 16:10-16:25/15 17:31	06:14 18:31	05:53 20:35	04:49 20:16-20:45/29 21:34	04:25 20:27-20:45/18 22:08
23	08:28 14:49-15:04/15 16:25	07:24 16:14-16:23/9 17:33	06:11 18:33	05:50 20:37	04:47 20:15-20:45/30 21:36	04:25 20:27-20:45/18 22:08
24	08:27 14:51-15:02/11 16:27	07:21 17:35	06:09 18:35	05:48 20:39	04:46 20:16-20:45/29 21:38	04:25 20:27-20:46/19 22:08
25	08:25 14:53-15:00/7 16:29	07:19 17:37	06:06 18:37	05:46 20:41	04:44 20:16-20:45/29 21:39	04:26 20:27-20:46/19 22:08
26	08:23 16:31	07:17 17:40	06:03 18:39	05:43 20:43	04:43 20:16-20:46/30 21:41	04:26 20:27-20:46/19 22:08
27	08:22 16:33	07:14 17:42	06:01 18:41	05:41 20:45	04:41 20:16-20:45/29 21:43	04:27 20:27-20:46/19 22:08
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	04:40 20:16-20:45/29 21:44	04:27 20:27-20:46/19 22:07
29	08:18 16:38		06:55 19:45	05:36 20:49	04:39 20:17-20:45/28 21:46	04:28 20:27-20:47/20 22:07
30	08:16 16:40		06:53 19:47	05:34 20:51	04:37 20:17-20:45/28 21:47	04:29 20:27-20:48/21 22:07
31	08:15 16:42		06:50 19:49		04:36 20:17-20:45/28 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	534	363	0	0	571	634

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: O1.b - VESTAS V172-7.2 7200 172.0 !O! hub: 175,0 m (TOT: 261,0 m) (25)  
 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	20:26-20:48/22	05:15	20:31-20:49/18	06:16	07:16	07:21	15:37-15:58/21	08:22	14:22-14:46/24
	22:06		21:26		20:12	18:52	16:35		15:44	
2	04:30	20:26-20:48/22	05:17	20:33-20:48/15	06:18	07:18	07:23	15:38-15:57/19	08:24	14:22-14:47/25
	22:06		21:24		20:10	18:49	16:33		15:43	
3	04:31	20:27-20:49/22	05:18	20:36-20:45/9	06:20	07:20	07:25	15:39-15:55/16	08:25	14:23-14:47/24
	22:05		21:22		20:07	18:47	16:30		15:42	
4	04:32	20:27-20:50/23	05:20		06:22	07:22	07:27	15:41-15:54/13	08:27	14:24-14:48/24
	22:05		21:19		20:04	18:44	16:28		15:41	
5	04:33	20:27-20:50/23	05:22		06:24	07:24	07:29	15:44-15:51/7	08:28	14:23-14:47/24
	22:04		21:17		20:02	18:41	16:26		15:41	
6	04:34	20:26-20:51/25	05:24		06:26	07:26	07:31		08:30	14:24-14:48/24
	22:03		21:15		19:59	18:39	16:24		15:40	
7	04:35	20:26-20:51/25	05:26		06:28	07:28	07:34		08:31	14:25-14:48/23
	22:03		21:13		19:56	18:36	16:22		15:39	
8	04:36	20:26-20:51/25	05:28		06:30	07:30	07:36		08:33	14:25-14:48/23
	22:02		21:11		19:54	18:34	16:20		15:39	
9	04:37	20:26-20:52/26	05:30		06:32	07:32	07:38		08:34	14:26-14:49/23
	22:01		21:09		19:51	18:31	16:18		15:38	
10	04:39	20:26-20:52/26	05:32		06:34	07:34	07:40		08:36	14:26-14:49/23
	22:00		21:06		19:48	18:28	16:16		15:38	
11	04:40	20:25-20:52/27	05:34		06:36	07:36	07:42		08:37	14:28-14:50/22
	21:59		21:04		19:46	18:26	16:14		15:38	
12	04:41	20:26-20:53/27	05:36		06:38	07:38	07:44		08:38	14:28-14:50/22
	21:58		21:02		19:43	18:23	16:12		15:37	
13	04:43	20:26-20:54/28	05:38		06:40	07:40	07:46		08:39	14:28-14:50/22
	21:57		20:59		19:40	18:21	16:10		15:37	
14	04:44	20:25-20:54/29	05:40		06:42	07:42	07:49		08:40	14:29-14:50/21
	21:55		20:57		19:38	18:18	16:08		15:37	
15	04:45	20:25-20:54/29	05:42		06:44	07:44	07:51		08:41	14:29-14:50/21
	21:54		20:55		19:35	18:16	16:07		15:37	
16	04:47	20:26-20:54/28	05:44		06:46	07:46	07:53		08:42	14:30-14:50/20
	21:53		20:52		19:32	18:13	16:05		15:37	
17	04:48	20:25-20:54/29	05:46		06:48	07:48	07:55	14:27-14:34/7	08:43	14:31-14:51/20
	21:52		20:50		19:30	18:11	16:03		15:37	
18	04:50	20:26-20:55/29	05:48		06:50	07:51	07:57	14:25-14:36/11	08:44	14:31-14:51/20
	21:50		20:48		19:27	18:08	16:01		15:37	
19	04:52	20:25-20:55/30	05:50		06:52	07:53	07:59	14:23-14:38/15	08:45	14:32-14:52/20
	21:49		20:45		19:24	18:06	16:00		15:37	
20	04:53	20:26-20:55/29	05:52		06:54	07:55	08:01	14:23-14:40/17	08:45	14:32-14:52/20
	21:47		20:43		19:22	18:03	15:58		15:38	
21	04:55	20:26-20:55/29	05:54		06:56	07:57	08:03	14:22-14:41/19	08:46	14:33-14:52/19
	21:46		20:40		19:19	18:01	15:57		15:38	
22	04:57	20:26-20:55/29	05:56		06:58	07:59	08:05	14:21-14:41/20	08:47	14:34-14:53/19
	21:44		20:38		19:16	17:58	15:55		15:39	
23	04:58	20:26-20:55/29	05:58		07:00	08:01	08:07	14:22-14:43/21	08:47	14:34-14:54/20
	21:42		20:35		19:13	17:56	15:54		15:39	
24	05:00	20:27-20:55/28	06:00		07:02	08:03	08:09	14:21-14:43/22	08:48	14:34-14:54/20
	21:41		20:33		19:11	17:53	15:52		15:40	
25	05:02	20:26-20:54/28	06:02		07:04	07:05	08:11	14:21-14:44/23	08:48	14:34-14:54/20
	21:39		20:30		19:08	16:51	15:51		15:40	
26	05:04	20:27-20:54/27	06:04		07:06	07:08	08:13	14:21-14:44/23	08:48	14:36-14:55/19
	21:37		20:28		19:05	16:49	15:50		15:41	
27	05:05	20:28-20:54/26	06:06		07:08	07:10	08:15	14:21-14:45/24	08:48	14:36-14:56/20
	21:35		20:25		19:03	16:46	15:48		15:42	
28	05:07	20:28-20:53/25	06:08		07:10	07:12	08:17	14:21-14:45/24	08:49	14:36-14:57/21
	21:33		20:22		19:00	16:44	15:47		15:43	
29	05:09	20:29-20:52/23	06:10		07:12	07:14	08:18	14:21-14:46/25	08:49	14:36-14:56/20
	21:32		20:20		18:57	16:42	15:46		15:44	
30	05:11	20:30-20:52/22	06:12		07:14	07:16	08:20	14:21-14:46/25	08:49	14:36-14:57/21
	21:30		20:17		18:55	16:39	15:45		15:45	
31	05:13	20:30-20:50/20	06:14			07:18			08:48	14:37-14:58/21
	21:28		20:15			16:37			15:46	
Potential sun hours	528		469		384	324	248		217	
Sum of minutes with flicker	810		42		0	287	352		665	

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: O2 - VESTAS V172-7.2 7200 172.0 IO! hub: 175,0 m (TOT: 261,0 m) (19)  
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 15:47	08:13 16:44	07:09 17:46	06:47 19:51	17:26-18:16/50 20:53	05:31 21:50
2	08:48 15:48	08:11 16:46	07:06 17:48	06:45 19:53	17:27-18:16/49 20:55	05:29 21:52
3	08:48 15:50	08:09 16:48	07:04 17:50	06:42 19:55	17:28-18:14/46 20:57	05:27 21:53
4	08:47 15:51	08:07 16:51	07:01 17:53	06:39 19:57	17:28-18:13/45 21:00	05:24 21:54
5	08:47 15:52	08:05 16:53	06:59 17:55	06:37 20:00	17:29-18:12/43 21:02	05:22 21:55
6	08:46 15:54	08:03 16:55	06:56 17:57	06:34 20:02	17:30-18:10/40 21:04	05:20 21:57
7	08:46 15:55	08:01 16:57	06:54 17:59	06:31 20:04	17:32-18:09/37 21:06	05:18 21:58
8	08:45 15:57	07:59 17:00	06:51 18:01	06:29 20:06	17:33-18:07/34 21:08	05:16 21:59
9	08:45 15:58	07:56 17:02	06:48 18:03	06:26 20:08	19:34-19:38/4 17:35-18:04/29	05:14 21:10
10	08:44 16:00	07:54 17:04	06:46 18:05	06:23 20:10	19:32-19:41/9 17:38-18:02/24	05:11 21:12
11	08:43 16:02	07:52 17:06	06:43 18:07	06:21 20:12	19:29-19:42/13 17:41-17:58/17	05:09 21:14
12	08:42 16:04	07:50 17:09	06:40 18:10	06:18 20:14	19:28-19:45/17 17:49-17:50/1	05:07 21:16
13	08:41 16:05	07:48 17:11	06:38 18:12	06:16 20:16	19:27-19:46/19 21:18	05:05 22:03
14	08:40 16:07	07:45 17:13	06:35 18:14	06:13 20:18	19:27-19:49/22 21:19	05:03 22:04
15	08:39 16:09	07:43 17:15	06:33 18:16	06:11 20:20	19:26-19:49/23 21:21	05:01 22:05
16	08:38 16:11	07:41 17:17	06:30 18:18	06:08 20:22	19:26-19:50/24 21:23	05:00 22:05
17	08:37 16:13	07:38 17:20	06:27 18:20	06:05 20:24	19:25-19:49/24 21:25	04:58 22:06
18	08:35 16:15	07:36 17:22	06:25 18:22	06:03 20:26	19:26-19:49/23 21:27	04:56 22:06
19	08:34 16:17	07:34 17:24	06:22 18:24	06:00 20:29	19:25-19:48/23 21:29	04:54 22:07
20	08:33 16:19	07:31 17:26	06:19 18:26	05:58 20:31	19:26-19:48/22 21:31	04:52 22:07
21	08:31 16:21	07:29 17:29	06:17 18:28	05:55 20:33	19:28-19:47/19 21:32	04:51 22:08
22	08:30 16:23	07:26 17:31	06:14 18:31	05:53 20:35	19:28-19:46/18 21:34	04:49 22:08
23	08:28 16:25	07:24 17:33	06:11 18:33	05:50 20:37	19:29-19:45/16 21:36	04:47 22:08
24	08:27 16:27	07:21 17:35	06:09 18:35	05:48 20:39	19:46-19:55/9 19:31-19:43/12	04:46 21:38
25	08:25 16:29	07:19 17:37	06:06 18:37	05:46 20:41	19:41-19:58/17 19:33-19:39/6	04:44 21:39
26	08:23 16:31	07:17 17:40	06:03 18:39	05:43 20:43	19:39-20:00/21 21:41	04:43 22:08
27	08:22 16:33	07:14 17:42	06:01 18:41	05:41 20:45	19:37-20:02/25 21:43	04:41 22:08
28	08:20 16:35	07:11 17:44	05:58 18:43	05:38 20:47	19:35-20:02/27 21:44	04:40 22:08
29	08:18 16:37		06:55 19:45	05:36 20:49	19:34-20:04/30 21:46	04:39 22:07
30	08:16 16:40		06:53 19:47	05:34 20:51	19:33-20:05/32 21:47	04:37 22:07
31	08:15 16:42		06:50 19:49		19:48-19:51/3 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	0	0	1026	870	951	0

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

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



Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: O2 - VESTAS V172-7.2 7200 172.0 IO! hub: 175,0 m (TOT: 261,0 m) (19)  
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 22:07	05:15 19:39-20:17/38 21:26	06:16 19:28-19:41/13 20:12 17:39-17:57/18	07:16 17:19-17:53/34 18:52	07:21 16:35	08:22 15:44
2	04:30 22:06	05:16 19:39-20:18/39 21:24	06:18 19:30-19:39/9 20:10 17:36-18:00/24	07:18 17:21-17:50/29 18:49	07:23 16:33	08:24 15:43
3	04:31 22:06	05:18 19:39-20:18/39 21:22	06:20 19:32-19:36/4 20:07 17:33-18:02/29	07:20 17:23-17:47/24 18:47	07:25 16:30	08:25 15:42
4	04:32 22:05	05:20 19:38-20:17/39 21:20	06:22 17:30-18:04/34 20:04	07:22 17:27-17:43/16 18:44	07:27 16:28	08:27 15:41
5	04:33 22:04	05:22 19:38-20:17/39 21:17	06:24 17:28-18:05/37 20:02	07:24 18:41	07:29 16:26	08:28 15:41
6	04:34 22:04	05:24 19:39-20:17/38 21:15	06:26 17:26-18:06/40 19:59	07:26 18:39	07:31 16:24	08:30 15:40
7	04:35 22:03	05:26 19:39-20:17/38 21:13	06:28 17:25-18:07/42 19:56	07:28 18:36	07:34 16:22	08:31 15:39
8	04:36 22:02	05:28 19:39-20:17/38 21:11	06:30 17:23-18:08/45 19:54	07:30 18:34	07:36 16:20	08:33 15:39
9	04:37 22:01	05:30 19:39-20:15/36 21:09	06:32 17:22-18:09/47 19:51	07:32 18:31	07:38 16:18	08:34 15:38
10	04:38 22:00	05:32 19:39-20:15/36 21:06	06:34 17:21-18:09/48 19:48	07:34 18:28	07:40 16:16	08:36 15:38
11	04:40 21:59	05:34 19:40-20:14/34 21:04	06:36 17:19-18:08/49 19:46	07:36 18:26	07:42 16:14	08:37 15:38
12	04:41 21:58	05:36 19:41-20:14/33 21:02	06:38 17:18-18:09/51 19:43	07:38 18:23	07:44 16:12	08:38 15:37
13	04:42 19:54-20:02/8 21:57	05:38 19:41-20:13/32 20:59	06:40 17:17-18:09/52 19:40	07:40 18:21	07:46 16:10	08:39 15:37
14	04:44 19:52-20:04/12 21:56	05:40 19:42-20:12/30 20:57	06:42 17:16-18:09/53 19:38	07:42 18:18	07:49 16:08	08:40 15:37
15	04:45 19:50-20:05/15 21:54	05:42 19:43-20:10/27 20:55	06:44 17:15-18:09/54 19:35	07:44 18:16	07:51 16:06	08:41 15:37
16	04:47 19:49-20:08/19 21:53	05:44 19:44-20:08/24 20:52	06:46 17:15-18:09/54 19:32	07:46 18:13	07:53 16:05	08:42 15:37
17	04:48 19:48-20:08/20 21:52	05:46 19:46-20:06/20 20:50	06:48 17:14-18:08/54 19:30	07:48 18:10	07:55 16:03	08:43 15:37
18	04:50 19:47-20:10/23 21:50	05:48 19:48-20:04/16 20:48	06:50 17:14-18:08/54 19:27	07:51 18:08	07:57 16:01	08:44 15:37
19	04:52 19:46-20:11/25 21:49	05:50 19:53-19:59/6 20:45	06:52 17:14-18:07/53 19:24	07:53 18:05	07:59 16:00	08:45 15:37
20	04:53 19:45-20:12/27 21:47	05:52 19:35-19:51/16 20:43	06:54 17:13-18:07/54 19:22	07:55 18:03	08:01 15:58	08:45 15:38
21	04:55 19:44-20:12/28 21:46	05:54 19:33-19:52/19 20:40	06:56 17:13-18:06/53 19:19	07:57 18:01	08:03 15:57	08:46 15:38
22	04:56 19:44-20:14/30 21:44	05:56 19:31-19:51/20 20:38	06:58 17:13-18:06/53 19:16	07:59 17:58	08:05 15:55	08:47 15:39
23	04:58 19:43-20:14/31 21:42	05:58 19:30-19:52/22 20:35	07:00 17:13-18:05/52 19:13	08:01 17:56	08:07 15:54	08:47 15:39
24	05:00 19:43-20:15/32 21:41	06:00 19:29-19:52/23 20:33	07:02 17:14-18:04/50 19:11	08:03 17:53	08:09 15:52	08:48 15:40
25	05:02 19:41-20:15/34 21:39	06:02 19:28-19:52/24 20:30	07:04 17:14-18:03/49 19:08	07:05 16:51	08:11 15:51	08:48 15:40
26	05:03 19:41-20:16/35 21:37	06:04 19:28-19:52/24 20:28	07:06 17:14-18:01/47 19:05	07:08 16:48	08:13 15:50	08:48 15:41
27	05:05 19:41-20:17/36 21:35	06:06 19:27-19:51/24 20:25	07:08 17:15-18:00/45 19:03	07:10 16:46	08:15 15:48	08:48 15:42
28	05:07 19:40-20:16/36 21:33	06:08 19:27-19:51/24 20:22	07:10 17:16-17:59/43 19:00	07:12 16:44	08:17 15:47	08:49 15:43
29	05:09 19:40-20:17/37 21:32	06:10 19:27-19:50/23 20:20	07:12 17:17-17:57/40 18:57	07:14 16:42	08:18 15:46	08:49 15:44
30	05:11 19:40-20:17/37 21:30	06:12 19:28-19:47/19 20:17	07:14 17:18-17:55/37 18:55	07:16 16:39	08:20 15:45	08:49 15:45
31	05:13 19:39-20:17/38 21:28	06:14 19:27-19:44/17 20:15	07:18 16:37	07:18 16:37	08:20 15:45	08:49 15:46
Potential sun hours	528	469	384	324	248	217
Sum of minutes with flicker	523	881	1387	103	0	0

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: O3 - VESTAS V172-7.2 7200 172.0 IO! hub: 175,0 m (TOT: 261,0 m) (20)  
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 15:47	08:13 15:10-15:36/26 16:44	07:09 15:05-15:43/38 17:46	06:47 18:33-19:18/45 19:51	05:31 20:53	04:35 21:50
2	08:48 15:48	08:11 15:08-15:38/30 16:46	07:06 15:06-15:41/35 17:48	06:45 18:32-19:17/45 19:53	05:29 20:55	04:34 21:52
3	08:48 15:50	08:09 15:07-15:40/33 16:48	07:04 15:08-15:39/31 17:50	06:42 18:30-19:18/48 19:55	05:27 20:57	04:33 21:53
4	08:47 15:51	08:07 15:06-15:42/36 16:51	07:01 15:10-15:36/26 17:53	06:39 18:28-19:17/49 19:57	05:24 20:59	04:32 21:54
5	08:47 15:52	08:05 15:04-15:43/39 16:53	06:59 15:14-15:34/20 17:55	06:37 18:27-19:17/50 20:00	05:22 21:02	04:31 21:55
6	08:46 15:54	08:03 15:04-15:44/40 16:55	06:56 15:20-15:28/8 17:57	06:34 18:26-19:15/49 20:02	05:20 21:04	04:30 21:57
7	08:46 15:55	08:01 15:03-15:45/42 16:57	06:54 17:59	06:31 18:25-19:14/49 20:04	05:18 21:06	04:29 21:58
8	08:45 15:57	07:58 15:03-15:47/44 17:00	06:51 18:01	06:29 18:25-19:13/48 20:06	05:16 21:08	04:28 21:59
9	08:44 15:58	07:56 15:01-15:47/46 17:02	06:48 18:03	06:26 18:23-19:11/48 20:08	05:14 21:10	04:28 22:00
10	08:44 16:00	07:54 15:01-15:48/47 17:04	06:46 18:05	06:23 18:23-19:09/46 20:10	05:11 21:12	04:27 22:01
11	08:43 16:02	07:52 15:00-15:48/48 17:06	06:43 18:07	06:21 18:23-19:08/45 20:12	05:09 21:14	04:26 22:02
12	08:42 16:04	07:50 15:00-15:49/49 17:09	06:40 18:10	06:18 18:23-19:08/45 20:14	05:07 21:16	04:26 22:03
13	08:41 16:05	07:48 15:00-15:50/50 17:11	06:38 18:12	06:16 18:22-19:07/45 20:16	05:05 21:17	04:26 22:03
14	08:40 16:07	07:45 14:59-15:49/50 17:13	06:35 18:14	06:13 18:23-19:08/45 20:18	05:03 21:19	04:25 22:04
15	08:39 16:09	07:43 14:59-15:50/51 17:15	06:33 18:16	06:11 18:22-19:07/45 20:20	05:01 21:21	04:25 22:05
16	08:38 16:11	07:41 14:58-15:50/52 17:17	06:30 18:18	06:08 18:23-19:07/44 20:22	05:00 21:23	04:25 22:05
17	08:37 16:13	07:38 14:59-15:50/51 17:20	06:27 18:20	06:05 18:22-19:05/43 20:24	04:58 21:25	04:24 22:06
18	08:35 16:15	07:36 14:58-15:50/52 17:22	06:25 18:22	06:03 18:23-19:05/42 20:26	04:56 21:27	04:24 22:06
19	08:34 16:17	07:34 14:59-15:50/51 17:24	06:22 18:24	06:00 18:23-19:04/41 20:29	04:54 21:29	04:24 22:07
20	08:33 16:19	07:31 14:58-15:50/52 17:26	06:19 18:26	05:58 18:24-19:03/39 20:31	04:52 21:31	04:24 22:07
21	08:31 16:21	07:29 14:59-15:50/51 17:29	06:17 17:55-18:00/5 18:28	05:55 18:25-19:02/37 20:33	04:51 21:32	04:25 22:07
22	08:30 16:23	07:26 14:59-15:49/50 17:31	06:14 17:53-18:03/10 18:31	05:53 18:26-19:00/34 20:35	04:49 21:34	04:25 22:08
23	08:28 16:25	07:24 15:00-15:49/49 17:33	06:11 17:51-18:04/13 18:33	05:50 18:27-18:59/32 20:37	04:47 21:36	04:25 22:08
24	08:27 16:27	07:21 15:00-15:48/48 17:35	06:09 17:49-18:06/17 18:35	05:48 18:29-18:58/29 20:39	04:46 21:38	04:25 22:08
25	08:25 16:29	07:19 15:01-15:48/47 17:37	06:06 17:49-18:09/20 18:37	05:46 18:30-18:56/26 20:41	04:44 21:39	04:26 22:08
26	08:23 16:31	07:16 15:02-15:46/44 17:40	06:03 17:48-18:11/23 18:39	05:43 18:32-18:54/22 20:43	04:43 21:41	04:26 22:08
27	08:22 16:33	07:14 15:02-15:45/43 17:42	06:01 17:47-18:12/25 18:41	05:41 18:35-18:51/16 20:45	04:41 21:43	04:27 22:08
28	08:20 16:35	07:11 15:04-15:44/40 17:44	05:58 17:48-18:15/27 18:43	05:38 18:39-18:45/6 20:47	04:40 21:44	04:27 22:08
29	08:18 16:37	15:20-15:25/5	06:55 18:42-19:17/35 19:45	05:36 20:49	04:39 21:46	04:28 22:07
30	08:16 16:40	15:15-15:31/16	06:53 18:38-19:17/39 19:47	05:34 20:51	04:37 21:47	04:28 22:07
31	08:15 16:42	15:12-15:34/22	06:50 18:36-19:18/42 19:49		04:36 21:49	
Potential sun hours		236	266	366	426	507
Sum of minutes with flicker		43	1261	414	1113	0

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

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0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: O3 - VESTAS V172-7.2 7200 172.0 !OI hub: 175,0 m (TOT: 261,0 m) (20)  
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 22:07	05:15 21:26	06:16 20:12	18:22-19:07/45	07:16 18:52	07:21 16:35
2	04:30 22:06	05:16 21:24	06:18 20:10	18:21-19:07/46	07:18 18:49	07:23 16:33
3	04:31 22:06	05:18 21:22	06:20 20:07	18:21-19:09/48	07:20 18:47	07:25 16:30
4	04:32 22:05	05:20 21:19	06:22 20:04	18:22-19:10/48	07:22 18:44	07:27 16:28
5	04:33 22:04	05:22 21:17	06:24 20:02	18:22-19:11/49	07:24 18:41	07:29 16:26
6	04:34 22:04	05:24 21:15	06:26 19:59	18:22-19:12/50	07:26 18:39	07:31 16:24
7	04:35 22:03	05:26 21:13	06:28 19:56	18:23-19:12/49	07:28 18:36	07:34 16:22
8	04:36 22:02	05:28 21:11	06:30 19:54	18:23-19:12/49	07:30 18:34	07:36 16:20
9	04:37 22:01	05:30 21:09	06:32 19:51	18:24-19:12/48	07:32 18:31	07:38 16:18
10	04:39 22:00	05:32 21:06	06:34 19:48	18:25-19:10/45	07:34 18:28	07:40 16:16
11	04:40 21:59	05:34 21:04	06:36 19:46	18:25-19:10/45	07:36 18:26	07:42 16:14
12	04:41 21:58	05:36 21:02	06:38 19:43	18:27-19:09/42	07:38 18:23	07:44 16:12
13	04:42 21:57	05:38 20:59	06:40 19:40	18:29-19:08/39	07:40 18:21	07:46 16:10
14	04:44 21:55	05:40 20:57	06:42 19:38	18:32-19:07/35	07:42 18:18	07:49 16:08
15	04:45 21:54	05:42 20:55	06:44 19:35	18:37-19:05/28	07:44 18:16	07:51 16:06
16	04:47 21:53	05:44 20:52	06:46 19:32	18:36-19:02/26	07:46 18:13	07:53 16:05
17	04:48 21:52	05:46 20:50	06:48 19:30	18:36-19:00/24	07:48 18:10	07:55 16:03
18	04:50 21:50	05:48 20:48	06:50 19:27	18:36-18:57/21	07:51 18:08	07:57 16:01
19	04:52 21:49	05:50 20:45	06:52 19:24	18:36-18:54/18	07:53 18:05	07:59 16:00
20	04:53 21:47	05:52 20:43	06:54 19:21	18:37-18:52/15	07:55 18:03	08:01 15:58
21	04:55 21:46	05:54 20:40	06:56 19:19	18:38-18:49/11	07:57 18:01	08:03 15:57
22	04:56 21:44	05:56 20:38	06:58 19:16	18:40-18:46/6	07:59 17:58	08:05 15:55
23	04:58 21:42	05:58 20:35	07:00 19:13	18:28-19:07/39	08:01 17:56	08:07 15:54
24	05:00 21:41	06:00 20:33	07:02 19:11	18:27-19:07/40	08:03 17:53	08:09 15:52
25	05:02 21:39	06:02 20:30	07:04 19:08	18:26-19:08/42	07:05 16:51	08:11 15:51
26	05:03 21:37	06:04 20:28	07:06 19:05	18:25-19:08/43	07:08 16:48	08:13 15:50
27	05:05 21:35	06:06 20:25	07:08 19:03	18:24-19:08/44	07:10 16:46	08:15 15:48
28	05:07 21:33	06:08 20:22	07:10 19:00	18:24-19:08/44	07:12 16:44	08:17 15:47
29	05:09 21:32	06:10 20:20	07:12 18:57	18:23-19:08/45	07:14 16:42	08:18 15:46
30	05:11 21:30	06:12 20:17	07:14 18:55	18:23-19:08/45	07:16 16:39	08:20 15:45
31	05:13 21:28	06:14 20:15		18:22-19:07/45	07:18 16:37	08:22 15:44
Potential sun hours	528	469	384	787	324	248
Sum of minutes with flicker	0	598	787	1056	421	0

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

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0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: 04 - VESTAS V172-7.2 7200 172.0 IO! hub: 175,0 m (TOT: 261,0 m) (22)  
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 15:47	08:13 15:14-15:44/30 16:44	07:09 16:55-17:13/18 17:46	06:47 19:51	05:31 20:53	04:35 21:50
2	08:48 15:49	08:11 15:14-15:44/30 16:46	07:06 16:53-17:14/21 17:48	06:45 19:53	05:29 20:55	04:34 21:52
3	08:48 15:50	08:09 15:15-15:44/29 16:49	07:04 16:52-17:16/24 17:50	06:42 19:55	05:27 20:57	04:33 21:53
4	08:47 15:51	08:07 15:15-15:44/29 16:51	07:01 16:50-17:16/26 17:53	06:39 19:57	05:25 20:59	04:32 21:54
5	08:47 15:52	08:05 15:15-15:43/28 16:53	06:59 16:49-17:16/27 17:55	06:37 20:00	05:22 21:02	04:31 21:55
6	08:46 15:54	08:03 15:16-15:43/27 16:55	06:56 16:49-17:17/28 17:57	06:34 20:02	05:20 21:04	04:30 21:57
7	08:46 15:55	08:01 15:17-15:43/26 16:57	06:54 16:48-17:17/29 17:59	06:31 20:04	05:18 21:06	04:29 21:58
8	08:45 15:57	07:59 15:18-15:43/25 17:00	06:51 16:48-17:18/30 18:01	06:29 20:06	05:16 21:08	04:28 21:59
9	08:44 15:59	07:56 15:19-15:41/22 17:02	06:48 16:48-17:17/29 18:03	06:26 20:08	05:14 21:10	04:28 22:00
10	08:44 16:00	07:54 15:21-15:40/19 17:04	06:46 16:47-17:16/29 18:05	06:24 20:10	05:12 21:12	04:27 22:01
11	08:43 16:02	07:52 15:22-15:37/15 17:06	06:43 16:47-17:15/28 18:08	06:21 20:12	05:09 21:14	04:27 22:02
12	08:42 16:04	07:50 15:26-15:35/9 17:09	06:40 16:48-17:15/27 18:10	06:18 20:14	05:07 21:16	04:26 22:03
13	08:41 16:05	07:48 17:11	06:38 16:48-17:14/26 18:12	06:16 20:16	05:05 21:17	04:26 22:03
14	08:40 16:07	07:45 17:13	06:35 16:49-17:12/23 18:14	06:13 20:18	05:03 21:19	04:25 22:04
15	08:39 16:09	07:43 17:15	06:33 16:51-17:11/20 18:16	06:11 20:20	05:02 21:21	04:25 22:05
16	08:38 16:11	07:41 17:18	06:30 16:52-17:09/17 18:18	06:08 20:22	05:00 21:23	04:25 22:05
17	08:37 15:24-15:26/2 16:13	07:38 17:20	06:27 16:54-17:06/12 18:20	06:05 20:24	04:58 21:25	04:25 22:06
18	08:35 15:21-15:31/10 16:15	07:36 17:22	06:25 18:22	06:03 20:26	04:56 21:27	04:24 22:06
19	08:34 15:19-15:33/14 16:17	07:34 17:24	06:22 18:24	06:00 20:29	04:54 21:29	04:24 22:07
20	08:33 15:17-15:34/17 16:19	07:31 17:26	06:19 18:26	05:58 20:31	04:52 21:31	04:24 22:07
21	08:31 15:17-15:37/20 16:21	07:29 17:29	06:17 18:28	05:55 20:33	04:51 21:32	04:25 22:07
22	08:30 15:16-15:38/22 16:23	07:26 17:31	06:14 18:31	05:53 20:35	04:49 21:34	04:25 22:08
23	08:28 15:15-15:39/24 16:25	07:24 17:33	06:11 18:33	05:50 20:37	04:47 21:36	04:25 22:08
24	08:27 15:15-15:40/25 16:27	07:21 17:35	06:09 18:35	05:48 20:39	04:46 21:38	04:25 22:08
25	08:25 15:14-15:40/26 16:29	07:19 17:37	06:06 18:37	05:46 20:41	04:44 21:39	04:26 22:08
26	08:23 15:14-15:41/27 16:31	07:17 17:40	06:03 18:39	05:43 20:43	04:43 21:41	04:26 22:08
27	08:22 15:13-15:42/29 16:33	07:14 17:02-17:05/3 17:42	06:01 18:41	05:41 20:45	04:41 21:43	04:27 22:08
28	08:20 15:13-15:42/29 16:35	07:11 16:58-17:11/13 17:44	05:58 18:43	05:38 20:47	04:40 21:44	04:27 22:08
29	08:18 15:13-15:43/30 16:38		06:55 19:45	05:36 20:49	04:39 21:46	04:28 22:07
30	08:16 15:13-15:43/30 16:40		06:53 19:47	05:34 20:51	04:37 21:47	04:28 22:07
31	08:15 15:13-15:44/31 16:42		06:50 19:49		04:36 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	336	305	414	0	0	0

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: 04 - VESTAS V172-7.2 7200 172.0 IO! hub: 175,0 m (TOT: 261,0 m) (22)  
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 22:07	05:15 21:26	06:16 20:12	07:16 17:27-17:54/27 18:52	07:21 14:50-15:10/20 16:35	08:22 15:44
2	04:30 22:06	05:17 21:24	06:18 20:10	07:18 17:26-17:54/28 18:49	07:23 14:48-15:11/23 16:33	08:24 15:43
3	04:31 22:06	05:18 21:22	06:20 20:07	07:20 17:26-17:54/28 18:47	07:25 14:48-15:12/24 16:30	08:25 15:42
4	04:32 22:05	05:20 21:19	06:22 20:04	07:22 17:25-17:54/29 18:44	07:27 14:46-15:13/27 16:28	08:27 15:41
5	04:33 22:04	05:22 21:17	06:24 20:02	07:24 17:24-17:54/30 18:41	07:29 14:45-15:13/28 16:26	08:28 15:41
6	04:34 22:04	05:24 21:15	06:26 19:59	07:26 17:24-17:53/29 18:39	07:31 14:46-15:14/28 16:24	08:30 15:40
7	04:35 22:03	05:26 21:13	06:28 19:56	07:28 17:24-17:53/29 18:36	07:34 14:45-15:14/29 16:22	08:31 15:39
8	04:36 22:02	05:28 21:11	06:30 19:54	07:30 17:25-17:53/28 18:34	07:36 14:44-15:14/30 16:20	08:33 15:39
9	04:37 22:01	05:30 21:09	06:32 19:51	07:32 17:25-17:52/27 18:31	07:38 14:45-15:15/30 16:18	08:34 15:38
10	04:39 22:00	05:32 21:06	06:34 19:48	07:34 17:26-17:51/25 18:28	07:40 14:44-15:15/31 16:16	08:36 15:38
11	04:40 21:59	05:34 21:04	06:36 19:46	07:36 17:26-17:49/23 18:26	07:42 14:45-15:16/31 16:14	08:37 15:38
12	04:41 21:58	05:36 21:02	06:38 19:43	07:38 17:27-17:47/20 18:23	07:44 14:45-15:15/30 16:12	08:38 15:37
13	04:43 21:57	05:38 20:59	06:40 19:40	07:40 17:29-17:45/16 18:21	07:46 14:45-15:15/30 16:10	08:39 15:37
14	04:44 21:55	05:40 20:57	06:42 19:38	07:42 17:31-17:42/11 18:18	07:49 14:46-15:15/29 16:08	08:40 15:37
15	04:45 21:54	05:42 20:55	06:44 19:35	07:44 18:16	07:51 14:46-15:15/29 16:06	08:41 15:37
16	04:47 21:53	05:44 20:52	06:46 19:32	07:46 18:13	07:53 14:47-15:14/27 16:05	08:42 15:37
17	04:48 21:52	05:46 20:50	06:48 19:30	07:48 18:10	07:55 14:48-15:14/26 16:03	08:43 15:37
18	04:50 21:50	05:48 20:48	06:50 19:27	07:51 18:08	07:57 14:49-15:14/25 16:01	08:44 15:37
19	04:52 21:49	05:50 20:45	06:52 19:24	07:53 18:05	07:59 14:49-15:13/24 16:00	08:45 15:37
20	04:53 21:47	05:52 20:43	06:54 19:22	07:55 18:03	08:01 14:51-15:13/22 15:58	08:45 15:38
21	04:55 21:46	05:54 20:40	06:56 19:19	07:57 18:01	08:03 14:52-15:12/20 15:57	08:46 15:38
22	04:57 21:44	05:56 20:38	06:58 19:16	07:59 17:58	08:05 14:53-15:10/17 15:55	08:47 15:39
23	04:58 21:42	05:58 20:35	07:00 19:13	08:01 17:56	08:07 14:56-15:10/14 15:54	08:47 15:39
24	05:00 21:41	06:00 20:33	07:02 19:11	08:03 17:53	08:09 14:58-15:08/10 15:52	08:48 15:40
25	05:02 21:39	06:02 20:30	07:04 19:08	07:05 16:51	08:11 15:02-15:04/2 15:51	08:48 15:40
26	05:04 21:37	06:04 20:28	07:06 17:39-17:47/8 19:05	07:08 16:49	08:13 15:50	08:48 15:41
27	05:05 21:35	06:06 20:25	07:08 17:35-17:50/15 19:03	07:10 16:46	08:15 15:48	08:48 15:42
28	05:07 21:33	06:08 20:22	07:10 17:32-17:52/20 19:00	07:12 16:44	08:17 15:47	08:49 15:43
29	05:09 21:32	06:10 20:20	07:12 17:30-17:53/23 18:57	07:14 16:42	08:18 15:46	08:49 15:44
30	05:11 21:30	06:12 20:17	07:14 17:29-17:54/25 18:55	07:16 14:54-15:05/11 16:39	08:20 15:45	08:49 15:45
31	05:13 21:28	06:14 20:15		07:18 14:51-15:07/16 16:37		08:49 15:46
Potential sun hours	528	469	384	324	248	217
Sum of minutes with flicker	0	0	91	377	606	0

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: 05 - VESTAS V172-7.2 7200 172.0 !O! hub: 175,0 m (TOT: 261,0 m) (21)  
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 13:08-13:19/11 15:47	08:13 14:40-15:15/35 16:44	07:09 17:46 19:51	06:47 20:53 21:50	05:31 22:06 21:26	04:35 22:06 21:26	04:29 22:06 21:26	05:15 22:06 21:26	06:16 22:06 21:26	07:16 22:06 21:26	07:21 14:23-14:35/12 16:35 15:54-16:01/7	08:22 14:22-14:46/24 15:44
2	08:48 13:10-13:19/9 15:48	08:11 14:41-15:15/34 16:46	07:06 17:48 19:53	06:45 20:55 21:51	05:29 22:06 21:26	04:34 22:06 21:26	04:30 22:06 21:26	05:17 22:06 21:26	06:18 22:06 21:26	07:18 22:06 21:26	07:23 14:20-14:37/17 16:33	08:24 14:23-14:46/23 15:43
3	08:48 14:46-14:50/4 15:50 13:12-13:18/6	08:09 14:42-15:15/33 16:48	07:04 17:50 19:55	06:42 20:57 21:53	05:27 22:05 21:22	04:33 22:05 21:22	04:31 22:05 21:22	05:18 22:05 21:22	06:20 22:05 21:22	07:20 22:05 21:22	07:25 14:17-14:39/22 16:30	08:25 14:24-14:45/21 15:42
4	08:47 14:45-14:54/9 15:51	08:07 14:43-15:14/31 16:51	07:01 17:53 19:57	06:39 20:54 21:54	05:24 22:05 21:21	04:32 22:05 21:21	04:32 22:05 21:21	05:20 22:05 21:21	06:22 22:05 21:21	07:22 22:05 21:21	07:27 14:16-14:41/25 16:28	08:27 14:26-14:45/19 15:41
5	08:47 14:43-14:55/12 15:52	08:05 14:44-15:13/29 16:53	06:59 17:55 19:59	06:37 20:52 21:55	05:22 22:04 21:17	04:31 22:04 21:17	04:33 22:04 21:17	05:22 22:04 21:17	06:24 22:04 21:17	07:24 22:04 21:17	07:29 14:15-14:42/27 16:26	08:28 14:26-14:44/18 15:41
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7	08:46 14:41-14:58/17 15:55	08:01 14:47-15:11/24 16:57	06:54 17:59 19:59	06:31 20:51 21:58	05:18 22:03 21:13	04:29 22:03 21:13	04:35 22:03 21:13	05:26 22:03 21:13	06:28 22:03 21:13	07:28 22:03 21:13	07:34 14:13-14:44/31 16:22	08:31 14:30-14:43/13 15:39
8	08:45 14:41-15:00/19 15:57	07:58 14:48-15:09/21 17:00	06:51 18:01 19:59	06:29 20:56 21:59	05:16 22:02 21:11	04:28 22:02 21:11	04:36 22:02 21:11	05:28 22:02 21:11	06:30 22:02 21:11	07:30 22:02 21:11	07:36 14:12-14:45/33 16:20	08:33 14:32-14:41/9 15:39
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10	08:44 14:40-15:02/22 16:00	07:54 14:55-15:04/9 17:04 16:24-16:32/8	06:46 18:05 19:59	06:23 20:52 21:12	05:12 22:01 21:06	04:27 22:01 21:06	04:39 22:01 21:06	05:32 22:01 21:06	06:34 22:01 21:06	07:34 22:01 21:06	07:40 14:11-14:46/35 16:16	08:35 12:59-13:08/9 15:38
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12	08:42 14:39-15:05/26 16:04	07:50 16:20-16:37/17 17:09	06:40 18:10 19:59	06:18 20:57 21:15	05:07 22:03 21:15	04:26 22:03 21:15	04:41 22:03 21:15	05:36 22:03 21:15	06:38 22:03 21:15	07:38 22:03 21:15	07:44 14:11-14:47/36 16:12	08:38 12:59-13:11/12 15:37
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17	08:36 14:38-15:10/32 16:13	07:38 16:17-16:42/25 17:20	06:27 18:20 19:59	06:05 20:54 21:25	04:58 22:06 21:25	04:25 22:06 21:25	04:48 22:06 21:25	05:46 22:06 21:25	06:48 22:06 21:25	07:48 22:06 21:25	16:53-17:07/14 16:03	08:43 12:58-13:15/17 15:37
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23	08:28 14:38-15:14/36 16:25	07:24 16:19-16:39/20 17:33	06:11 18:33 19:59	05:50 20:57 21:36	04:47 22:08 21:36	04:25 22:08 21:36	04:58 22:08 21:36	05:58 22:08 21:36	07:00 22:08 21:36	08:01 22:08 21:36	16:47-17:12/25 15:54	08:47 13:01-13:19/18 15:39
24	08:27 14:38-15:14/36 16:27	07:21 16:20-16:37/17 17:35	06:09 18:35 19:59	05:48 20:59 21:38	04:46 22:08 21:38	04:25 22:08 21:38	04:50 22:08 21:38	05:00 22:08 21:38	06:00 22:08 21:38	07:02 22:08 21:38	16:47-17:12/25 15:52	08:48 13:01-13:19/18 15:40
25	08:25 14:38-15:15/37 16:29	07:19 16:22-16:34/12 17:37	06:06 18:37 19:59	05:46 20:56 21:39	04:44 22:08 21:39	04:26 22:08 21:39	04:52 22:08 21:39	05:02 22:08 21:39	06:02 22:08 21:39	07:04 22:08 21:39	15:46-16:11/25 15:51	08:48 13:02-13:19/17 15:40
26	08:23 14:38-15:15/37 16:31	07:16 17:40 19:59	06:03 18:39 19:59	05:43 20:43 21:41	04:43 22:08 21:41	04:26 22:08 21:41	05:04 22:08 21:41	06:04 22:08 21:41	07:06 22:08 21:41	08:08 22:08 21:41	15:47-16:12/25 15:50	08:48 13:03-13:20/17 15:41
27	08:22 14:38-15:15/37 16:33	07:14 17:42 19:59	06:01 18:41 19:59	05:41 20:45 21:43	04:41 22:08 21:43	04:27 22:08 21:43	05:05 22:08 21:43	06:06 22:08 21:43	07:08 22:08 21:43	08:10 22:08 21:43	15:47-16:11/24 15:48	08:48 13:04-13:20/16 15:42
28	08:20 14:38-15:15/37 16:35	07:11 17:44 19:59	05:58 18:43 19:59	05:38 20:47 21:44	04:40 22:07 21:44	04:27 22:07 21:44	05:07 22:07 21:44	06:08 22:07 21:44	07:10 22:07 21:44	08:12 22:07 21:44	15:47-16:09/22 15:47	08:48 13:05-13:21/16 15:43
29	08:18 14:39-15:15/36 16:38	07:09 17:44 19:59	05:55 18:45 19:59	05:36 20:49 21:46	04:39 22:07 21:46	04:28 22:07 21:46	05:09 22:07 21:46	06:10 22:07 21:46	07:12 22:07 21:46	08:14 22:07 21:46	15:49-16:08/19 15:46	08:49 13:05-13:20/15 15:44
30	08:16 14:39-15:15/36 16:40	07:07 17:44 19:59	05:53 18:47 19:59	05:34 20:51 21:47	04:37 22:07 21:47	04:28 22:07 21:47	05:11 22:07 21:47	06:12 22:07 21:47	07:14 22:07 21:47	08:16 22:07 21:47	15:50-16:06/16 15:45	08:49 13:06-13:20/14 15:45
31	08:14 14:40-15:15/35 16:42	07:04 17:44 19:59	05:50 18:49 19:59	05:30 20:49 21:49	04:36 22:07 21:49	04:28 22:07 21:49	05:13 22:07 21:49	06:14 22:07 21:49	07:16 22:07 21:49	08:18 22:07 21:49	15:51-16:03/12 15:46	08:48 13:07-13:20/13 15:46
Potential sun hours	236	266	366	426	507	528	528	469	384	324	248	217
Sum of minutes with flicker	842	579	0	0	0	0	0	0	0	322	945	497

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

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



Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: O6 - VESTAS V172-7.2 7200 172.0 !OI! hub: 175,0 m (TOT: 261,0 m) (28)  
 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 14:48-15:04/16 15:47 14:15-14:43/28	08:13 15:05-15:41/36 16:44	07:09 16:13-16:48/35 17:46 15:20-16:03/43	06:47 19:51	05:31 20:53	04:34 21:50
2	08:48 14:48-15:05/17 15:48 14:15-14:43/28	08:11 15:05-15:42/37 16:46	07:06 16:12-16:47/35 17:48 15:20-16:02/42	06:44 19:53	05:28 20:55	04:33 21:52
3	08:48 14:48-15:06/18 15:49 14:16-14:45/29	08:09 15:05-15:43/38 16:48	07:04 16:13-16:48/35 17:50 15:22-16:01/39	06:42 19:55	05:26 20:57	04:32 21:53
4	08:48 14:48-15:07/19 15:50 14:16-14:45/29	08:07 15:04-15:46/42 16:50	07:01 16:13-16:47/34 17:52 15:23-15:59/36	06:39 19:57	05:24 21:00	04:31 21:54
5	08:47 14:48-15:07/19 15:52 14:16-14:45/29	08:05 15:03-15:50/47 16:52	06:59 16:13-16:46/33 17:54 15:24-15:57/33	06:36 19:59	05:22 21:02	04:30 21:56
6	08:47 14:49-15:09/20 15:53 14:17-14:47/30	08:03 15:03-15:53/50 16:55	06:56 16:14-16:45/31 17:57 15:27-15:56/29	06:34 20:01	05:19 21:04	04:29 21:57
7	08:46 14:49-15:09/20 15:55 14:17-14:47/30	08:01 15:03-15:56/53 16:57	06:53 16:15-16:44/29 17:59 15:29-15:53/24	06:31 20:04	05:17 21:06	04:28 21:58
8	08:45 14:49-15:10/21 15:56 14:17-14:48/31	07:58 15:03-15:58/55 16:59	06:51 17:27-17:32/5 15:31-15:50/19 18:01 16:16-16:42/26	06:28 20:06	05:15 21:08	04:28 21:59
9	08:45 14:49-15:11/22 15:58 14:17-14:48/31	07:56 15:03-15:59/56 17:01	06:48 17:24-17:35/11 15:38-15:44/6 18:03 16:18-16:41/23	06:26 20:08	05:13 21:10	04:27 22:00
10	08:44 14:17-15:12/55 15:59	07:54 15:03-16:01/58 17:04	06:46 17:21-17:37/16 18:05 16:19-16:38/19	06:23 20:10	05:11 21:12	04:26 22:01
11	08:43 14:18-15:12/54 16:01	07:52 15:03-16:02/59 17:06	06:43 17:19-17:39/20 18:07 16:22-16:35/13	06:20 20:12	05:09 21:14	04:26 22:02
12	08:42 14:17-15:12/55 16:03	07:50 15:03-16:03/60 17:08	06:40 17:19-17:40/21 18:09	06:18 20:14	05:07 21:16	04:25 22:03
13	08:41 14:18-15:13/55 16:05	07:47 15:04-16:04/60 17:10	06:38 17:16-17:40/24 18:11	06:15 20:16	05:05 21:18	04:25 22:04
14	08:40 14:19-15:14/55 16:06	07:45 15:03-16:04/61 17:13	06:35 17:13-17:40/27 18:14	06:13 20:18	05:03 21:20	04:24 22:04
15	08:39 14:18-15:14/56 16:08	07:43 15:04-16:05/61 17:15	06:32 17:13-17:39/26 18:16	06:10 20:20	05:01 21:21	04:24 22:05
16	08:38 14:19-15:15/56 16:10	07:41 15:04-16:05/61 17:17	06:30 17:11-17:40/29 18:18	06:08 20:22	04:59 21:23	04:24 22:06
17	08:37 14:19-15:15/56 16:12	07:38 15:05-16:06/61 17:19 16:27-16:36/9	06:27 17:10-17:40/30 18:20	06:05 20:24	04:57 21:25	04:24 22:06
18	08:35 14:20-15:15/55 16:14	07:36 15:05-16:06/61 17:22 16:23-16:40/17	06:24 17:09-17:39/30 18:22	06:02 20:26	04:55 21:27	04:24 22:07
19	08:34 14:20-15:15/55 16:16	07:34 15:07-16:07/60 17:24 16:21-16:42/21	06:22 17:09-17:40/31 18:24	06:00 20:28	04:53 21:29	04:24 22:07
20	08:33 14:21-15:15/54 16:18	07:31 15:08-16:06/58 17:26 16:19-16:43/24	06:19 17:08-17:40/32 18:26	05:57 20:31	04:52 21:31	04:24 22:07
21	08:31 14:22-15:16/54 16:20	07:29 15:09-16:07/58 17:28 16:18-16:45/27	06:16 17:07-17:39/32 18:28	05:55 20:33	04:50 21:33	04:24 22:08
22	08:30 14:53-15:15/22 16:22 14:22-14:52/30	07:26 15:11-16:07/56 17:30 16:16-16:46/30	06:14 17:08-17:40/32 18:30	05:52 20:35	04:48 21:34	04:24 22:08
23	08:28 14:53-15:15/22 16:24 14:23-14:52/29	07:24 15:13-16:07/54 17:33 16:16-16:47/31	06:11 17:07-17:39/32 18:32	05:50 20:37	04:47 21:36	04:24 22:08
24	08:27 14:54-15:14/20 15:18-15:24/6 16:26 14:23-14:51/28	07:21 15:16-16:06/50 17:35 16:15-16:47/32	06:08 17:07-17:38/31 18:34	05:48 20:39	04:45 21:38	04:24 22:08
25	08:25 14:55-15:29/34 16:28 14:25-14:52/27	07:19 15:18-16:05/47 17:37 16:14-16:47/33	06:06 17:08-17:37/29 18:37	05:45 20:41	04:44 21:40	04:25 22:08
26	08:23 14:57-15:32/35 16:30 14:26-14:51/25	07:16 16:14-16:48/34 17:39 15:19-16:05/46	06:03 17:08-17:36/28 18:39	05:43 20:43	04:42 21:41	04:25 22:08
27	08:22 14:59-15:34/35 16:33 14:27-14:50/23	07:14 16:13-16:48/35 17:41 15:19-16:04/45	06:00 17:09-17:34/25 18:41	05:40 20:45	04:41 21:43	04:26 22:08
28	08:20 15:01-15:36/35 16:35 14:29-14:49/20	07:11 16:13-16:49/36 17:44 15:20-16:04/44	05:58 17:11-17:33/22 18:43	05:38 20:47	04:39 21:44	04:26 22:08
29	08:18 14:31-14:48/17 16:37 15:09-15:38/29		06:55 18:12-18:31/19 19:45	05:35 20:49	04:38 21:46	04:27 22:08
30	08:16 14:33-14:46/13 16:39 15:07-15:38/31		06:52 18:14-18:28/14 19:47	05:33 20:51	04:37 21:47	04:28 22:07
31	08:15 14:37-14:41/4 16:41 15:06-15:39/33		06:50 18:19-18:23/4 19:49		04:35 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	1615	1803	1154	0	0	0

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: 06 - VESTAS V172-7.2 7200 172.0 !OI! hub: 175,0 m (TOT: 261,0 m) (28)

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 17:56-18:19/23 18:52	07:21 14:33-15:30/57 16:34	08:22 13:59-14:54/55 15:43
2	04:29 22:06	05:16 21:24	06:17 20:09	07:17 17:58-18:18/20 18:49 17:03-17:12/9	07:23 14:32-15:28/56 16:32	08:24 14:00-14:54/54 15:42
3	04:30 22:06	05:18 21:22	06:19 20:07	07:19 17:59-18:16/17 18:46 16:59-17:15/16	07:25 14:33-15:28/55 16:30	08:25 14:32-14:54/22 15:42
4	04:31 22:05	05:20 21:20	06:21 20:04	07:21 18:00-18:13/13 18:44 16:56-17:17/21	07:27 14:33-15:25/52 16:28	08:27 14:33-14:54/21 15:41
5	04:32 22:04	05:22 21:17	06:23 20:01	07:23 18:02-18:10/8 16:11-16:25/14 18:41 16:54-17:18/24	07:29 14:33-15:23/50 16:26	08:29 14:34-14:54/20 15:40
6	04:33 22:04	05:24 21:15	06:25 19:59	07:26 16:52-17:19/27 18:38 16:06-16:28/22	07:31 14:34-15:21/47 16:23	08:30 14:35-14:55/20 15:39
7	04:34 22:03	05:26 21:13	06:27 19:56	07:28 16:50-17:20/30 18:36 16:03-16:30/27	07:34 14:34-15:15/41 16:21	08:32 14:35-14:54/19 15:39
8	04:35 22:02	05:28 21:11	06:29 19:54	07:30 16:49-17:20/31 18:33 16:00-16:32/32	07:36 14:35-15:13/38 16:19	08:33 14:36-14:55/19 15:38
9	04:37 22:01	05:30 21:09	06:31 19:51	07:32 16:49-17:22/33 18:31 15:59-16:34/35	07:38 14:36-15:12/36 16:17	08:34 14:37-14:54/17 15:38
10	04:38 22:00	05:32 21:06	06:33 19:48	07:34 16:48-17:22/34 18:28 15:57-16:35/38	07:40 14:36-15:11/35 16:15	08:36 14:38-14:55/17 15:37
11	04:39 21:59	05:33 21:04	06:35 19:45	07:36 16:47-17:22/35 18:25 15:55-16:36/41	07:42 14:09-14:13/4 16:13 14:38-15:11/33	08:37 14:38-14:54/16 15:37
12	04:40 21:58	05:35 21:02	06:37 19:43	07:38 16:46-17:21/35 18:23 15:54-16:36/42	07:44 14:04-14:17/13 16:11 14:39-15:10/31	08:38 14:39-14:53/14 15:37
13	04:42 21:57	05:37 20:59	06:39 18:06-18:19/13 19:40	07:40 16:46-17:21/35 18:20 15:53-16:36/43	07:46 14:03-14:20/17 16:10 14:41-15:10/29	08:39 14:41-14:54/13 15:36
14	04:43 21:56	05:39 20:57	06:41 18:03-18:21/18 19:37	07:42 16:45-17:21/36 18:18 15:51-16:37/46	07:49 14:33-15:08/35 16:08 14:01-14:21/20	08:40 14:41-14:53/12 15:36
15	04:45 21:54	05:41 20:55	06:43 18:00-18:23/23 19:35	07:44 16:46-17:21/35 18:15 15:51-16:38/47	07:51 14:31-15:06/35 16:06 13:59-14:22/23	08:41 14:42-14:53/11 15:36
16	04:46 21:53	05:43 20:52	06:45 17:59-18:24/25 19:32	07:46 16:46-17:20/34 18:13 15:50-16:38/48	07:53 14:30-15:05/35 16:04 13:59-14:24/25	08:42 14:43-14:53/10 15:36
17	04:48 21:52	05:45 20:50	06:47 17:57-18:24/27 19:29	07:48 15:50-16:38/48 18:10 16:46-17:19/33	07:55 14:29-15:03/34 16:02 13:58-14:25/27	08:43 14:44-14:53/9 15:36
18	04:49 21:50	05:47 20:48	06:49 17:56-18:25/29 19:27	07:50 15:46-16:37/51 18:08 16:46-17:18/32	07:57 14:28-14:48/20 14:52-14:58/6 16:01 13:57-14:25/28	08:44 14:44-14:52/8 15:36
19	04:51 21:49	05:49 20:45	06:51 17:55-18:25/30 19:24	07:53 15:44-16:38/54 18:05 16:47-17:18/31	07:59 14:28-14:50/22 15:59 13:58-14:27/29	08:45 14:45-14:53/8 15:37
20	04:52 21:47	05:51 20:43	06:53 17:54-18:25/31 19:21	07:55 15:41-16:38/57 18:03 16:48-17:17/29	08:01 14:28-14:50/22 15:58 13:57-14:27/30	08:46 14:46-14:53/7 15:37
21	04:54 21:46	05:53 20:40	06:55 17:53-18:25/32 19:19	07:57 15:39-16:37/58 18:00 16:49-17:15/26	08:03 13:57-14:51/54 15:56	08:46 14:46-14:53/7 15:37
22	04:56 21:44	05:55 20:38	06:57 17:53-18:25/32 19:16	07:59 15:37-16:37/60 17:58 16:50-17:13/23	08:05 13:57-14:52/55 15:54	08:47 14:47-14:54/7 15:38
23	04:58 21:42	05:57 20:35	06:59 17:52-18:25/33 19:13	08:01 15:37-16:37/60 17:55 16:52-17:12/20	08:07 13:57-14:52/55 15:53	08:47 14:47-14:54/7 15:38
24	04:59 21:41	05:59 20:33	07:01 17:52-18:24/32 19:10	08:03 15:36-16:36/60 17:53 16:54-17:09/15	08:09 13:57-14:52/55 15:52	08:48 14:48-14:56/8 15:39
25	05:01 21:39	06:01 20:30	07:03 17:52-18:23/31 19:08	07:05 14:34-15:36/62 16:50 15:58-16:04/6	08:11 13:57-14:53/56 15:50	08:48 14:48-14:56/8 15:40
26	05:03 21:37	06:03 20:28	07:05 17:52-18:23/31 19:05	07:08 14:34-15:36/62 16:48	08:13 13:57-14:53/56 15:49	08:48 14:48-14:57/9 15:40
27	05:05 21:35	06:05 20:25	07:07 17:53-18:22/29 19:02	07:10 14:33-15:35/62 16:46	08:15 13:57-14:53/56 15:48	08:49 14:48-14:58/10 15:41
28	05:06 21:34	06:07 20:22	07:09 17:53-18:21/28 19:00	07:12 14:33-15:34/61 16:43	08:17 13:59-14:53/54 15:47	08:49 14:48-14:59/11 15:42
29	05:08 21:32	06:09 20:20	07:11 17:54-18:21/27 18:57	07:14 14:33-15:33/60 16:41	08:18 13:59-14:54/55 15:45	08:49 14:48-15:00/12 15:43
30	05:10 21:30	06:11 20:17	07:13 17:55-18:20/25 18:54	07:16 14:32-15:32/60 16:39	08:20 13:59-14:54/55 15:44	08:49 14:48-15:01/13 15:44
31	05:12 21:28	06:13 20:15		07:18 14:32-15:31/59 16:36		08:49 14:48-15:02/14 15:45
Potential sun hours	529	469	384	324	248	217
Sum of minutes with flicker	0	0	496	2040	1536	1264

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: P19.2b - VESTAS V172-7.2 7200 172.0 IO! hub: 175,0 m (TOT: 261,0 m) (35)  
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	14:48-15:04/16	08:13	07:09	06:47	05:31	04:35	05:37-05:56/19
	15:47		16:44	17:46	19:51	20:53	21:50	
2	08:48	14:48-15:06/18	08:11	07:06	06:45	05:29	04:34	05:37-05:56/19
	15:49		16:46	17:48	19:53	20:55	21:51	
3	08:48	14:48-15:07/19	08:09	07:04	06:42	05:27	04:33	05:38-05:55/17
	15:50		16:48	17:50	19:55	20:57	21:53	
4	08:47	14:49-15:09/20	08:07	07:01	06:39	05:24	04:32	05:39-05:56/17
	15:51		16:51	17:53	19:57	20:59	21:54	
5	08:47	14:49-15:11/22	08:05	06:59	06:37	05:22	04:31	05:40-05:55/15
	15:52		16:53	17:55	19:59	21:01	21:55	
6	08:46	14:49-15:12/23	08:03	06:56	06:34	05:20	04:30	05:40-05:54/14
	15:54		16:55	17:57	20:02	21:03	21:56	
7	08:46	14:49-15:12/23	08:01	06:53	06:31	05:18	04:29	05:42-05:54/12
	15:55		16:57	17:59	20:04	21:05	21:58	
8	08:45	14:49-15:13/24	07:58	06:51	06:29	05:16	04:28	05:42-05:53/11
	15:57		17:00	18:01	20:06	21:07	21:59	
9	08:44	14:49-15:14/25	07:56	06:48	06:26	05:14	04:28	05:43-05:52/9
	15:59		17:02	18:03	20:08	21:09	22:00	
10	08:44	14:49-15:15/26	07:54	06:46	06:23	05:12	04:27	05:44-05:52/8
	16:00		17:04	18:05	20:10	21:11	22:01	
11	08:43	14:49-15:15/26	07:52	06:43	06:21	05:09	04:27	05:46-05:52/6
	16:02		17:06	18:07	20:12	21:13	22:02	
12	08:42	14:50-15:16/26	07:50	06:40	06:18	05:07	04:26	05:47-05:49/2
	16:04		17:09	18:10	20:14	21:15	22:02	
13	08:41	14:50-15:17/27	07:47	06:38	06:16	05:05	04:26	
	16:05		17:11	18:12	20:16	21:17	22:03	
14	08:40	14:50-15:17/27	07:45	06:35	06:13	05:03	04:25	
	16:07		17:13	18:14	20:18	21:19	22:04	
15	08:39	14:51-15:18/27	07:43	06:33	06:11	05:02	04:25	
	16:09		17:15	18:16	20:20	21:21	22:05	
16	08:38	14:51-15:18/27	07:41	06:30	06:08	05:00	04:25	
	16:11		17:17	18:18	20:22	21:23	22:05	
17	08:36	14:52-15:18/26	07:38	06:27	06:05	04:58	04:25	
	16:13		17:20	18:20	20:24	21:25	22:06	
18	08:35	14:52-15:18/26	07:36	06:25	06:03	04:56	04:24	
	16:15		17:22	18:22	20:26	21:27	22:06	
19	08:34	14:53-15:19/26	07:34	06:22	06:00	04:54	04:24	
	16:17		17:24	18:24	20:28	21:29	22:07	
20	08:32	14:53-15:19/26	07:31	06:19	05:58	04:52	04:24	
	16:19		17:26	18:26	20:31	21:31	22:07	
21	08:31	14:53-15:18/25	07:29	06:17	05:55	04:51	04:25	
	16:21		17:29	18:28	20:33	21:32	22:07	
22	08:30	14:55-15:19/24	07:26	06:14	05:53	04:49	04:25	
	16:23		17:31	18:30	20:35	21:34	22:08	
23	08:28	14:56-15:18/22	07:24	06:11	05:50	04:47	04:25	
	16:25		17:33	18:33	20:37	21:36	22:08	
24	08:27	14:57-15:18/21	07:21	06:09	05:48	04:46	04:25	
	16:27		17:35	18:35	20:39	21:38	22:08	
25	08:25	14:58-15:17/19	07:19	06:06	05:46	04:44	04:26	
	16:29		17:37	18:37	20:41	21:39	22:08	
26	08:23	15:00-15:16/16	07:16	06:03	05:43	04:43	04:26	
	16:31		17:40	18:39	20:43	21:41	22:08	
27	08:22	15:03-15:14/11	07:14	06:01	05:41	04:41	04:27	
	16:33		17:42	18:41	20:45	21:42	22:08	
28	08:20		07:11	05:58	05:38	04:40	04:27	
	16:35		17:44	18:43	20:47	21:44	22:07	
29	08:18			06:55	05:36	04:39	04:28	
	16:38			19:45	20:49	21:46	22:07	
30	08:16			06:53	05:34	04:37	04:29	
	16:40			19:47	20:51	21:47	22:07	
31	08:14			06:50		04:36		
	16:42			19:49		21:49		
Potential sun hours	236		266	366	426	507	528	149
Sum of minutes with flicker	618		0	0	0	476		

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: P19.2b - VESTAS V172-7.2 7200 172.0 !O! hub: 175,0 m (TOT: 261,0 m) (35)

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	05:51-05:55/4	05:15	05:48-06:03/15	06:16	07:16	07:20	08:22	14:32-14:58/26
	22:06		21:26		20:12	18:52	16:35	15:44	
2	04:30	05:49-05:56/7	05:17	05:50-06:02/12	06:18	07:18	07:23	08:23	14:32-14:58/26
	22:06		21:24		20:09	18:49	16:33	15:43	
3	04:31	05:48-05:57/9	05:18	05:52-06:00/8	06:20	07:20	07:25	08:25	14:33-14:58/25
	22:05		21:21		20:07	18:47	16:30	15:42	
4	04:32	05:48-05:58/10	05:20		06:22	07:22	07:27	08:27	14:34-14:58/24
	22:05		21:19		20:04	18:44	16:28	15:41	
5	04:33	05:47-05:59/12	05:22		06:24	07:24	07:29	08:28	14:34-14:58/24
	22:04		21:17		20:02	18:41	16:26	15:41	
6	04:34	05:47-06:00/13	05:24		06:26	07:26	07:31	08:30	14:35-14:58/23
	22:03		21:15		19:59	18:39	16:24	15:40	
7	04:35	05:46-06:01/15	05:26		06:28	07:28	07:33	08:31	14:36-14:58/22
	22:03		21:13		19:56	18:36	16:22	15:39	
8	04:36	05:46-06:02/16	05:28		06:30	07:30	07:36	08:33	14:36-14:56/20
	22:02		21:11		19:54	18:34	16:20	15:39	
9	04:37	05:45-06:03/18	05:30		06:32	07:32	07:38	08:34	14:37-14:56/19
	22:01		21:09		19:51	18:31	16:18	15:38	
10	04:39	05:45-06:03/18	05:32		06:34	07:34	07:40	08:35	14:37-14:55/18
	22:00		21:06		19:48	18:28	16:16	15:38	
11	04:40	05:45-06:05/20	05:34		06:36	07:36	07:42	08:37	14:39-14:55/16
	21:59		21:04		19:46	18:26	16:14	15:38	
12	04:41	05:45-06:05/20	05:36		06:38	07:38	07:44	08:38	12:57-13:01/4
	21:58		21:02		19:43	18:23	16:12	15:37	14:39-14:55/16
13	04:43	05:44-06:05/21	05:38		06:40	07:40	07:46	08:39	12:56-13:03/7
	21:57		20:59		19:40	18:21	16:10	15:37	14:40-14:54/14
14	04:44	05:44-06:06/22	05:40		06:42	07:42	07:48	08:40	12:55-13:04/9
	21:55		20:57		19:38	18:18	16:08	15:37	14:40-14:54/14
15	04:45	05:44-06:07/23	05:42		06:44	07:44	07:51	08:41	12:55-13:05/10
	21:54		20:55		19:35	18:15	16:06	15:37	14:41-14:54/13
16	04:47	05:44-06:07/23	05:44		06:46	07:46	07:53	08:42	12:54-13:06/12
	21:53		20:52		19:32	18:13	16:05	15:37	14:42-14:53/11
17	04:48	05:43-06:07/24	05:46		06:48	07:48	07:55	08:43	12:55-13:07/12
	21:51		20:50		19:30	18:10	16:03	15:37	14:43-14:54/11
18	04:50	05:44-06:08/24	05:48		06:50	07:51	07:57	08:44	12:55-13:08/13
	21:50		20:47		19:27	18:08	16:01	15:37	14:44-14:54/10
19	04:52	05:43-06:07/24	05:50		06:52	07:53	07:59	08:45	12:55-13:09/14
	21:49		20:45		19:24	18:05	16:00	15:37	14:44-14:54/10
20	04:53	05:44-06:08/24	05:52		06:54	07:55	08:01	08:45	12:55-13:09/14
	21:47		20:43		19:21	18:03	15:58	15:38	14:44-14:54/10
21	04:55	05:43-06:08/25	05:54		06:56	07:57	08:03	08:46	12:56-13:10/14
	21:45		20:40		19:19	18:01	15:57	15:38	14:45-14:55/10
22	04:57	05:44-06:08/24	05:56		06:58	07:59	08:05	08:47	12:56-13:10/14
	21:44		20:38		19:16	17:58	15:55	15:39	14:45-14:55/10
23	04:58	05:43-06:08/25	05:58		07:00	08:01	08:07	08:47	12:57-13:11/14
	21:42		20:35		19:13	17:56	15:54	15:39	14:46-14:56/10
24	05:00	05:44-06:08/24	06:00		07:01	08:03	08:09	08:47	12:57-13:11/14
	21:40		20:33		19:11	17:53	15:52	15:40	14:46-14:56/10
25	05:02	05:44-06:09/25	06:02		07:03	07:05	08:11	08:48	12:58-13:11/13
	21:39		20:30		19:08	16:51	15:51	15:40	14:46-14:57/11
26	05:04	05:44-06:08/24	06:04		07:05	07:08	08:13	08:48	12:59-13:12/13
	21:37		20:28		19:05	16:48	15:50	15:41	14:47-14:57/10
27	05:05	05:45-06:08/23	06:06		07:07	07:10	08:15	08:48	13:00-13:12/12
	21:35		20:25		19:03	16:46	15:48	15:42	14:48-14:59/11
28	05:07	05:44-06:07/23	06:08		07:09	07:12	08:16	08:48	13:01-13:12/11
	21:33		20:22		19:00	16:44	15:47	15:43	14:47-14:59/12
29	05:09	05:45-06:06/21	06:10		07:12	07:14	08:18	08:48	13:01-13:11/10
	21:31		20:20		18:57	16:42	15:46	15:44	14:47-15:00/13
30	05:11	05:46-06:06/20	06:12		07:14	07:16	08:20	08:48	13:03-13:11/8
	21:30		20:17		18:55	16:39	15:45	15:45	14:48-15:02/14
31	05:13	05:47-06:05/18	06:14			07:18		08:48	13:05-13:10/5
	21:28		20:15			16:37		15:46	14:48-15:03/15
Potential sun hours	528		469		384	324	248	217	
Sum of minutes with flicker	599		35		0	0	375	701	

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

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0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: Pr11 - VESTAS V172-7.2 7200 172.0 !OI hub: 175,0 m (TOT: 261,0 m) (29)

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 12:06-12:57/51 15:47 13:47-14:23/36	08:13 13:58-14:32/34 15:27-15:43/16 16:43 12:31-12:49/18	07:09 16:11-16:27/16 17:46 15:21-15:50/29	06:47 19:51	05:31 20:53	04:34 21:50
2	08:48 12:06-12:57/51 15:48 13:47-14:23/36	08:11 13:59-14:31/32 15:24-15:46/22 16:46 12:36-12:44/8	07:06 16:14-16:23/9 17:48 15:23-15:48/25	06:44 19:53	05:28 20:55	04:33 21:52
3	08:48 12:06-12:58/52 15:49 13:47-14:24/37	08:09 14:01-14:30/29 16:48 15:23-15:49/26	07:04 15:27-15:45/18 17:50	06:42 19:55	05:26 20:57	04:32 21:53
4	08:48 12:07-12:58/51 15:50 13:47-14:24/37	08:07 14:03-14:29/26 16:50 15:21-15:51/30	07:01 15:31-15:40/9 17:52	06:39 19:57	05:24 20:59	04:31 21:54
5	08:47 12:07-12:58/51 15:52 13:47-14:25/38	08:05 14:04-14:27/23 16:52 15:19-15:51/32	06:59 17:54	06:36 19:59	05:22 21:02	04:30 21:56
6	08:47 12:08-12:59/51 15:53 13:48-14:26/38	08:03 14:07-14:25/18 16:55 15:19-15:53/34	06:56 17:56	06:34 20:01	05:19 21:04	04:29 21:57
7	08:46 12:08-12:59/51 15:55 13:48-14:27/39	08:01 14:11-14:22/11 16:57 15:18-15:55/37	06:53 17:59	06:31 20:03	05:17 21:06	04:28 21:58
8	08:45 12:08-13:00/52 15:56 13:48-14:27/39	07:58 15:17-15:56/39 16:59	06:51 18:01	06:28 20:06	05:15 21:08	04:28 21:59
9	08:45 12:09-13:00/51 15:58 13:48-14:28/40	07:56 15:16-15:56/40 17:01	06:48 18:03	06:26 20:08	05:13 21:10	04:27 22:00
10	08:44 12:09-13:00/51 15:59 13:49-14:29/40	07:54 16:14-16:25/11 17:04 15:16-15:57/41	06:45 18:05	06:23 20:10	05:11 21:12	04:26 22:01
11	08:43 12:10-13:00/50 16:01 13:48-14:29/41	07:52 16:11-16:27/16 17:06 15:15-15:57/42	06:43 18:07	06:20 20:12	05:09 21:14	04:26 22:02
12	08:42 12:10-13:00/50 16:03 13:48-14:30/42	07:50 16:09-16:30/21 17:08 15:14-15:58/44	06:40 18:09	06:18 20:14	05:07 21:16	04:25 22:03
13	08:41 12:10-13:00/50 16:05 13:49-14:30/41	07:47 16:08-16:31/23 17:10 15:14-15:59/45	06:38 18:11	06:15 20:16	05:05 21:18	04:25 22:04
14	08:40 12:11-13:00/49 16:06 13:49-14:31/42	07:45 16:07-16:32/25 17:13 15:14-15:59/45	06:35 18:13	06:13 20:18	05:03 21:19	04:24 22:04
15	08:39 12:11-12:59/48 16:08 13:49-14:31/42	07:43 16:06-16:33/27 17:15 15:14-16:00/46	06:32 18:16	06:10 20:20	05:01 21:21	04:24 22:05
16	08:38 12:12-13:00/48 16:10 13:50-14:32/42	07:41 16:05-16:34/29 17:17 15:13-15:59/46	06:30 18:18	06:08 20:22	04:59 21:23	04:24 22:06
17	08:37 12:12-12:59/47 16:12 13:49-14:32/43	07:38 16:05-16:35/30 17:19 15:14-16:00/46	06:27 18:20	06:05 20:24	04:57 21:25	04:24 22:06
18	08:35 12:13-13:00/47 16:14 13:50-14:33/43	07:36 16:04-16:34/30 17:21 15:13-15:59/46	06:24 18:22	06:02 20:26	04:55 21:27	04:24 22:07
19	08:34 12:14-13:00/46 16:16 13:50-14:33/43	07:33 16:04-16:35/31 17:24 15:14-15:59/45	06:22 18:24	06:00 20:28	04:53 21:29	04:24 22:07
20	08:33 12:14-12:59/45 16:18 13:50-14:33/43	07:31 16:04-16:35/31 17:26 15:13-15:59/46	06:19 18:26	05:57 20:30	04:52 21:31	04:24 22:07
21	08:31 12:15-13:00/45 16:20 13:51-14:34/43	07:29 16:04-16:35/31 17:28 15:14-15:59/45	06:16 18:28	05:55 20:33	04:50 21:33	04:24 22:08
22	08:30 12:16-12:59/43 16:22 13:51-14:34/43	07:26 16:04-16:34/30 17:30 15:14-15:58/44	06:14 18:30	05:52 20:35	04:48 21:34	04:24 22:08
23	08:28 12:17-12:59/42 16:24 13:51-14:34/43	07:24 16:05-16:35/30 17:33 15:15-15:58/43	06:11 18:32	05:50 20:37	04:47 21:36	04:24 22:08
24	08:27 12:17-12:58/41 16:26 13:52-14:34/42	07:21 16:05-16:33/28 17:35 15:15-15:57/42	06:08 18:34	05:47 20:39	04:45 21:38	04:24 22:08
25	08:25 13:52-14:34/42 16:28 12:18-12:58/40	07:19 16:05-16:32/27 17:37 15:16-15:55/39	06:06 18:36	05:45 20:41	04:44 21:39	04:25 22:08
26	08:23 13:53-14:35/42 16:30 12:20-12:58/38	07:16 16:06-16:32/26 17:39 15:17-15:55/38	06:03 18:39	05:43 20:43	04:42 21:41	04:25 22:08
27	08:22 13:54-14:35/41 16:33 12:22-12:57/35	07:14 16:07-16:30/23 17:41 15:18-15:53/35	06:00 18:41	05:40 20:45	04:41 21:43	04:26 22:08
28	08:20 13:55-14:34/39 16:35 12:23-12:56/33	07:11 16:09-16:29/20 17:43 15:20-15:52/32	05:58 18:43	05:38 20:47	04:39 21:44	04:26 22:08
29	08:18 13:56-14:34/38 16:37 12:25-12:55/30		06:55 19:45	05:35 20:49	04:38 21:46	04:27 22:07
30	08:16 13:55-14:33/38 16:39 12:26-12:53/27		06:52 19:47	05:33 20:51	04:37 21:47	04:28 22:07
31	08:14 13:57-14:32/35 15:31-15:39/8 16:41 12:28-12:51/23		06:50 19:49		04:35 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	2645	1774	106	0	0	0

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

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

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: Pr11 - VESTAS V172-7.2 7200 172.0 !OI hub: 175,0 m (TOT: 261,0 m) (29)  
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 15:44-15:54/10 16:34 14:45-15:27/42	08:22 11:51-12:41/50 15:43 13:30-14:11/41
2	04:29 22:06	05:16 21:24	06:17 20:09	07:17 18:49	07:23 14:46-15:26/40 16:32	08:24 11:52-12:42/50 15:42 13:31-14:11/40
3	04:30 22:06	05:18 21:22	06:19 20:07	07:19 18:46	07:25 14:47-15:25/38 16:30	08:25 11:52-12:43/51 15:42 13:32-14:11/39
4	04:31 22:05	05:20 21:19	06:21 20:04	07:21 18:44	07:27 13:40-13:52/12 16:28 14:48-15:24/36	08:27 11:53-12:44/51 15:41 13:32-14:12/40
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Potential sun hours	529	469	384	324	248	217
Sum of minutes with flicker	0	0	0	1374	2199	2687

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

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



Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: Pr12 - VESTAS V172-7.2 7200 172.0 !OI hub: 175,0 m (TOT: 261,0 m) (27) 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	08:49 13:39-14:13/34 15:47 14:44-14:59/15	08:13 14:56-15:06/10 16:44 15:44-16:03/19	07:09 17:46 19:51 20:53	06:47 21:50 05:29 04:33	05:31 22:07 05:29 04:33	04:34 22:07 04:33 04:29	04:28 21:26 05:16 06:18	05:14 20:12 06:18 07:17	06:16 18:52 07:17 07:17	07:15 18:52 07:17 07:17	07:20 15:41-16:00/19 16:34 15:10-15:38/28	08:22 13:26-13:58/32 15:43 14:24-14:49/25
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26	08:22 14:49-15:13/24 16:33 14:00-14:09/9	07:14 17:41 18:41	06:00 18:41 19:59 20:45	05:40 21:43 04:41 04:26	04:41 21:43 04:41 04:26	05:05 22:08 06:06 07:07	05:05 22:08 07:07 08:09	06:06 21:35 07:07 08:09	07:07 18:10 07:07 18:10	07:07 18:10 07:07 18:10	08:15 15:40-16:01/21 16:46 15:12-15:36/24	08:49 13:35-14:10/35 15:41 14:44-14:53/9
27	08:20 14:50-15:12/22 16:35 14:00-14:09/9	07:11 17:44 18:43	05:58 18:43 19:59 20:47	05:38 21:44 04:39 04:26	04:39 21:44 04:39 04:26	05:07 22:08 06:08 07:09	05:07 22:08 07:09 08:11	06:08 21:34 07:09 08:11	07:09 18:10 07:09 18:10	07:09 18:10 07:09 18:10	08:17 13:26-13:55/29 16:42 15:11-15:37/26	08:49 13:36-14:11/35 15:42 14:24-14:49/25
28	08:18 14:51-15:12/21 16:37 15:51-15:56/5	07:09 16:18-16:23/5 17:28	06:05 18:28 19:45 20:49	05:55 21:34 04:46 04:25	04:46 21:34 04:46 04:25	04:57 22:08 05:57 06:59	04:57 22:08 06:59 07:59	05:57 21:34 06:59 07:59	07:59 18			

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: Pr25 - VESTAS V172-7.2 7200 172.0 !OI hub: 175,0 m (TOT: 261,0 m) (33)

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 17:46	16:52-17:14/22 07:43-08:27/44 08:44-09:24/40	06:47 19:51	18:42-19:08/26 20:53	05:31 20:53	19:38-20:14/36 21:50	04:34 21:50	20:15-20:33/18 21:50	
2	08:48 15:48	08:11 16:46	07:06 17:48	16:51-17:14/23 07:42-08:25/43 08:44-09:22/38	06:44 19:53	18:42-19:06/24 20:55	05:28 20:55	19:38-20:14/36 21:52	04:33 21:52	20:15-20:33/18 21:52	
3	08:48 15:49	08:09 16:48	07:04 17:50	16:51-17:15/24 07:41-08:24/43 08:46-09:21/35	06:41 19:55	18:42-19:05/23 20:57	05:26 20:57	19:38-20:14/36 21:53	04:32 21:53	20:16-20:32/16 21:53	
4	08:47 15:50	08:07 16:50	07:01 17:52	16:50-17:15/25 08:09-08:20/11 08:46-09:19/33 07:40-08:08/28	06:39 19:57	19:22-19:29/7 18:43-19:04/21	05:24 20:59	19:38-20:14/36 21:54	04:31 21:54	20:18-20:32/14 21:54	
5	08:47 15:52	08:05 16:52	06:58 17:54	16:50-17:14/24 07:38-08:08/30 08:47-09:17/30	06:36 19:59	19:19-19:30/11 18:44-19:03/19	05:22 21:01	19:39-20:13/34 20:23-20:24/1	04:30 21:55	20:19-20:31/12 21:55	
6	08:46 15:53	08:03 16:55	08:59-09:11/12	06:56 17:56	17:20-17:28/8 08:50-09:15/25 16:50-17:15/25 07:38-08:09/31	06:33 20:01	19:18-19:33/15 18:46-19:01/15	05:19 21:03	19:39-20:12/33 20:17-20:29/12	04:29 21:57	20:20-20:30/10 21:57
7	08:46 15:55	08:00 16:57	08:56-09:15/19	06:53 17:58	17:17-17:30/13 08:52-09:12/20 16:50-17:14/24 07:37-08:09/32	06:31 21:03	19:16-19:34/18 18:48-18:58/10	05:17 21:05	19:40-20:11/31 20:15-20:31/16	04:28 21:58	20:22-20:29/7 21:58
8	08:45 15:56	07:58 16:59	08:54-09:18/24	06:51 18:01	17:15-17:32/17 08:56-09:06/10 16:50-17:13/23 07:36-08:09/33	06:28 20:05	19:15-19:36/21 20:05	05:15 21:07	19:40-20:09/29 20:14-20:32/18	04:27 21:59	20:24-20:27/3 21:59
9	08:44 15:58	07:56 17:01	08:51-09:19/28	06:48 18:03	17:14-17:34/20 07:37-08:09/32 16:51-17:11/20	06:26 20:08	19:15-19:36/21 21:10	05:13 21:10	19:41-20:07/26 20:12-20:33/21	04:27 22:00	20:07-20:27/26 22:00
10	08:44 15:59	07:54 17:03	08:50-09:21/31	06:45 18:05	17:14-17:35/21 07:36-08:09/33 16:52-17:10/18	06:23 20:10	19:14-19:36/22 21:11	05:11 21:11	19:42-20:00/18 20:11-20:34/23	04:26 22:01	20:00-20:20/18 22:01
11	08:43 16:01	07:52 17:06	08:48-09:22/34	06:43 18:07	17:13-17:35/22 07:36-08:08/32 16:53-17:08/15	06:20 20:12	19:14-19:36/22 21:13	05:09 21:13	19:44-19:58/14 20:10-20:35/25	04:26 22:02	19:58-20:08/14 22:02
12	08:42 16:03	07:50 17:08	08:47-09:23/36	06:40 18:09	17:12-17:34/22 07:36-08:08/32 16:56-17:05/9	06:18 20:14	19:14-19:35/21 21:15	05:07 21:15	19:46-19:56/10 20:10-20:35/25	04:25 22:03	19:56-20:06/10 22:03
13	08:41 16:04	07:47 17:10	08:47-09:25/38	06:37 18:11	17:13-17:35/22 07:36-08:07/31	06:15 20:16	19:15-19:35/20 21:17	05:05 21:17	20:10-20:36/26 21:17	04:25 22:04	20:06-20:26/26 22:04
14	08:40 16:06	07:45 17:12	08:45-09:25/40	06:35 18:13	17:12-17:34/22 07:36-08:06/30	06:13 20:18	19:15-19:33/18 21:19	05:03 21:19	20:09-20:36/27 21:19	04:24 22:04	20:02-20:32/27 22:04
15	08:39 16:08	07:43 17:15	08:45-09:26/41	06:32 18:15	17:12-17:33/21 07:38-08:05/27 17:44-17:47/3	06:10 20:20	19:16-19:33/17 21:21	05:01 21:21	20:09-20:36/27 21:21	04:24 22:05	20:00-20:30/27 22:05
16	08:38 16:10	07:40 17:17	08:44-09:26/42	06:30 18:18	17:14-17:32/18 07:38-08:03/25 17:41-17:50/9	06:07 20:22	19:17-19:30/13 21:23	04:59 21:23	20:08-20:36/28 21:23	04:24 22:06	20:00-20:30/28 22:06
17	08:36 16:12	07:38 17:19	08:44-09:27/43	06:27 18:20	17:15-17:30/15 07:39-08:01/22 17:39-17:52/13	06:05 20:24	19:19-19:28/9 21:25	04:57 21:25	20:09-20:37/28 21:25	04:24 22:06	20:00-20:30/28 22:06
18	08:35 16:14	07:36 17:21	08:43-09:27/44	06:24 18:22	17:16-17:28/12 07:40-07:58/18 17:37-17:53/16	06:02 20:26	17:28-17:40/12 21:27	04:55 21:27	20:08-20:37/29 21:27	04:23 22:07	20:00-20:30/29 22:07
19	08:34 16:16	07:33 17:24	08:43-09:28/45	06:22 18:24	17:21-17:24/3 07:44-07:56/12 17:37-17:56/19	06:00 20:28	20:09-20:37/28 21:29	04:53 21:29	20:09-20:37/28 21:29	04:23 22:07	20:00-20:30/28 22:07
20	08:33 16:18	07:31 17:26	08:42-09:27/45	06:19 18:26	17:36-17:57/21 17:36-17:56/21	05:57 20:30	20:09-20:37/28 21:31	04:52 21:31	20:09-20:37/28 21:31	04:23 22:07	20:00-20:30/28 22:07
21	08:31 16:20	07:29 17:28	08:42-09:28/46	06:16 18:28	17:35-17:56/21 17:35-17:56/21	05:55 20:32	19:48-19:59/11 21:32	04:50 21:32	20:08-20:36/28 21:32	04:24 22:08	20:00-20:30/28 22:08
22	08:30 16:22	07:26 17:30	08:42-09:28/46	06:13 18:30	17:35-17:56/21 18:00-08:29/29	05:52 20:35	19:46-20:02/16 21:34	04:48 21:34	20:09-20:37/28 21:34	04:24 22:08	20:00-20:30/28 22:08
23	08:28 16:24	07:24 17:32	08:42-09:28/46	06:11 18:32	17:36-18:04/28 17:51-08:30/39	05:50 20:37	19:43-20:05/22 21:36	04:47 21:36	20:10-20:37/27 21:36	04:24 22:08	20:00-20:30/27 22:08
24	08:27 16:26	07:21 17:35	08:42-09:27/45	06:08 18:34	17:36-18:05/29 17:48-08:29/41	05:47 20:39	19:42-20:08/26 21:38	04:45 21:38	20:10-20:36/26 21:38	04:24 22:08	20:00-20:30/26 22:08
25	08:25 16:28	07:19 17:37	17:01-17:06/5 07:45-08:29/44	06:05 18:36	17:36-18:06/30 17:42-09:26/44	05:45 20:41	19:41-20:10/29 21:39	04:43 21:39	20:10-20:36/26 21:39	04:25 22:08	20:00-20:30/26 22:08
26	08:23 16:30	07:16 17:39	16:57-17:10/13 07:44-08:29/45	06:03 18:38	17:38-18:08/30 16:55-17:12/17 07:43-08:28/45	05:42 20:43	19:40-20:11/31 21:41	04:42 21:41	20:11-20:36/25 21:41	04:25 22:08	20:00-20:30/25 22:08
27	08:22 16:32	07:14 17:41	16:55-17:12/17 07:43-08:28/45	06:00 18:41	17:39-18:08/29 16:53-17:13/20 07:43-08:28/45	05:40 20:45	19:39-20:13/34 21:43	04:41 21:43	20:12-20:36/24 21:43	04:26 22:08	20:00-20:30/24 22:08
28	08:20 16:35	07:11 17:43	16:53-17:13/20 07:43-08:28/45	05:57 18:43	17:43-18:08/25 18:43-19:09/26	05:38 20:47	19:39-20:15/36 21:44	04:39 21:44	20:12-20:35/23 21:44	04:26 22:08	20:00-20:30/23 22:08
29	08:18 16:37	07:08 19:45	08:44-09:25/41	06:55 19:45	18:43-19:09/26 18:42-19:08/26	05:35 20:49	19:39-20:15/36 21:46	04:38 21:46	20:12-20:34/22 21:46	04:27 22:07	20:00-20:30/22 22:07
30	08:16 16:39	07:06 19:47	08:44-09:25/41	06:52 19:47	18:42-19:08/26 18:42-19:07/25	05:33 20:51	19:37-20:14/37 21:47	04:37 21:47	20:13-20:34/21 21:47	04:28 22:07	20:00-20:30/21 22:07
31	08:14 16:41	07:04 19:49	08:44-09:25/41	06:49 19:49	18:42-19:07/25 18:42-19:07/25	05:33 20:51	19:37-20:14/37 21:47	04:37 21:47	20:14-20:34/20 21:49	04:28 22:07	20:00-20:30/20 22:07
Potential sun hours	236	266	366	426	507	528					
Sum of minutes with flicker	0	1356	1679	651	971	98					

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: Pr25 - VESTAS V172-7.2 7200 172.0 !OI hub: 175,0 m (TOT: 261,0 m) (33)  
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 19:55-20:07/12 21:26 20:20-20:45/25	06:15 19:13-19:35/22 20:12	07:15 17:52-18:14/22 08:16-08:47/31 18:52 17:38-17:43/5	07:20 08:20-08:50/30 16:34	08:22 15:43
2	04:29 22:06	05:16 19:53-20:09/16 21:24 20:21-20:45/24	06:17 19:13-19:35/22 20:09	07:17 17:52-18:14/22 08:15-08:47/32 18:49 17:33-17:46/13	07:23 08:21-08:48/27 16:32	08:24 15:42
3	04:30 22:06	05:18 19:52-20:11/19 21:21 20:22-20:44/22	06:19 19:13-19:34/21 20:07	07:19 17:52-18:13/21 08:14-08:47/33 18:46 17:31-17:48/17	07:25 08:23-08:46/23 16:30	08:25 15:41
4	04:31 22:05	05:20 19:51-20:18/27 21:19 20:23-20:43/20	06:21 19:13-19:34/21 20:04	07:21 17:52-18:12/20 08:14-08:46/32 18:44 17:29-17:49/20	07:27 08:26-08:44/18 16:28	08:27 15:41
5	04:32 20:28-20:34/6 22:04	05:22 19:50-20:19/29 21:17 20:24-20:42/18	06:23 19:12-19:31/19 20:01 18:44-18:54/10	07:23 17:52-18:10/18 08:13-08:46/33 18:41 17:28-17:49/21	07:29 08:29-08:40/11 16:25	08:28 15:40
6	04:33 20:27-20:36/9 22:04	05:23 19:49-20:21/32 21:15 20:25-20:40/15	06:25 19:13-19:28/15 19:59 18:41-18:56/15	07:25 17:53-18:07/14 09:30-09:46/16 18:38 17:27-17:50/23 08:13-08:45/32	07:31 16:23	08:30 15:39
7	04:34 20:26-20:37/11 22:03	05:25 19:48-20:22/34 21:13 20:28-20:37/9	06:27 19:14-19:25/11 19:56 18:39-18:58/19	07:27 17:54-18:05/11 09:26-09:49/23 18:36 17:26-17:50/24 08:13-08:44/31	07:33 16:21	08:31 15:39
8	04:35 20:25-20:38/13 22:02	05:27 19:48-20:23/35 21:11	06:29 19:16-19:23/7 19:53 18:38-18:59/21	07:29 17:56-18:02/6 09:24-09:51/27 18:33 17:25-17:50/25 08:13-08:44/31	07:36 16:19	08:33 15:38
9	04:36 20:24-20:39/15 22:01	05:29 19:47-20:23/36 21:08	06:31 18:36-18:59/23 19:51	07:32 17:25-17:49/24 08:46-08:54/8 18:30 09:21-09:53/32 08:15-08:43/28	07:38 16:17	08:34 15:37
10	04:38 20:23-20:40/17 22:00	05:31 19:47-20:24/37 21:06	06:33 18:35-19:00/25 19:48	07:34 17:24-17:49/25 08:43-08:57/14 18:28 09:21-09:55/34 08:15-08:42/27	07:40 16:15	08:36 15:37
11	04:39 20:23-20:41/18 21:59	05:33 19:46-20:23/37 21:04	06:35 18:35-19:00/25 19:45	07:36 17:25-17:49/24 08:16-08:58/42 18:25 09:19-09:56/37	07:42 16:13	08:37 15:37
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13	04:42 20:22-20:42/20 21:57	05:37 19:46-20:23/37 20:59	06:39 18:34-18:59/25 19:40	07:40 17:26-17:47/21 08:16-09:00/44 18:20 09:16-09:57/41	07:46 16:09	08:39 15:36
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15	04:45 20:21-20:44/23 21:54	05:41 19:46-20:22/36 20:55	06:43 18:34-18:58/24 19:35	07:44 17:28-17:43/15 08:16-09:01/45 18:15 09:15-09:58/43	07:51 16:06	08:41 15:36
16	04:46 20:21-20:44/23 21:53	05:43 19:47-20:20/33 20:52	06:45 18:29-18:58/29 19:32	07:46 17:30-17:41/11 08:17-09:01/44 18:12 09:14-09:59/45	07:53 16:04	08:42 15:36
17	04:48 20:20-20:44/24 21:52	05:45 19:47-20:18/31 20:50	06:47 18:26-18:57/31 19:29	07:48 09:14-09:59/45 18:10 08:18-09:01/43	07:55 16:02	08:43 11:01-11:04/3 15:36
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19	04:51 20:19-20:45/26 21:49	05:49 19:48-20:13/25 20:45	06:51 18:22-18:52/30 19:24	07:52 09:12-09:58/46 08:23-08:30/7 18:05 08:31-09:01/30	07:59 15:59	08:45 11:34-11:38/4 15:37
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21	04:54 20:19-20:46/27 21:46	05:53 19:51-20:06/15 20:40	06:55 18:21-18:46/25 19:18	07:57 09:13-09:58/45 18:00 08:31-08:59/28	08:03 15:56	08:46 11:34-11:39/5 15:37
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25	05:01 20:19-20:48/29 21:39	06:01 20:30	07:03 18:00-18:10/10 08:25-08:41/16 19:08 18:20-18:37/17	07:05 08:13-08:56/43 16:50 07:36-07:54/18	08:11 15:50	08:48 11:38-11:40/2 15:39
26	05:03 20:19-20:47/28 21:37	06:03 19:20-19:31/11 20:27	07:05 17:57-18:11/14 08:23-08:43/20 19:05 18:21-18:34/13	07:07 08:14-08:56/42 16:48 07:39-07:51/12	08:13 15:49	08:48 11:05-11:08/3 15:40
27	05:05 20:19-20:47/28 21:35	06:05 19:18-19:32/14 20:25	07:07 17:55-18:13/18 08:21-08:45/24 19:02 18:22-18:31/9	07:10 08:14-08:55/41 16:46	08:15 15:48	08:48 15:41
28	05:06 20:20-20:47/27 21:33	06:07 19:17-19:34/17 20:22	07:09 17:54-18:13/19 08:19-08:45/26 19:00 18:23-18:29/6	07:12 08:15-08:54/39 16:43	08:17 15:46	08:49 15:42
29	05:08 20:19-20:47/28 21:31	06:09 19:15-19:34/19 20:20	07:11 17:53-18:13/20 18:57 08:18-08:46/28	07:14 08:16-08:54/38 16:41	08:18 15:45	08:49 15:43
30	05:10 20:20-20:47/27 21:30	06:11 19:14-19:35/21 20:17	07:13 17:52-18:13/21 18:54 08:16-08:47/31	07:16 08:17-08:53/36 16:39	08:20 15:44	08:49 15:44
31	05:12 19:59-20:05/6 21:28 20:20-20:46/26	06:13 19:14-19:35/21 20:14	07:18 08:18-08:51/33 16:36	07:18 08:18-08:51/33 16:36	15:44 15:45	08:49 15:45
Potential sun hours	529	469	384	324	248	217
Sum of minutes with flicker	608	862	913	2333	109	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	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
 Vilandes 3-6  
 LV-1010 Riga  
 0037167242411  
 Laura Kurzemniece / laura.kurzemniece@environment.lv  
 Calculated:  
 16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: Pr3b - VESTAS V172-7.2 7200 172.0 !OI hub: 175,0 m (TOT: 261,0 m) (36)  
 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 15:24-15:51/27	07:09 16:22-16:54/32	06:47 18:20-18:59/39	05:31 18:56-19:38/42	04:34 20:55-21:12/17
	15:46	16:43 08:59-09:25/26	17:46	19:51	20:53	21:50
2	08:48	08:11 15:24-15:51/27	07:06 16:22-16:53/31	06:44 18:19-18:59/40	05:28 18:56-19:38/42	04:33 20:55-21:13/18
	15:48	16:46 08:59-09:26/27	17:48	19:53	20:55	21:52
3	08:48	08:09 15:25-15:51/26	07:04 17:16-17:20/4	06:41 18:18-18:59/41	05:26 18:57-19:38/41	04:32 20:54-21:14/20
	15:49	16:48 08:59-09:26/27	17:50 16:21-16:52/31	19:55	20:57	21:53
4	08:47	08:07 16:05-16:16/11 08:59-09:27/28	07:01 17:14-17:23/9	06:39 18:18-18:59/41	05:24 18:57-19:37/40	04:31 20:55-21:15/20
	15:50	16:50 15:24-15:51/27	17:52 16:22-16:52/30	19:57 19:13-19:25/12	20:59	21:54
5	08:47	08:05 16:04-16:18/14 08:59-09:26/27	06:58 17:12-17:25/13	06:36 18:18-18:59/41	05:22 18:58-19:37/39	04:30 20:54-21:15/21
	15:52	16:52 15:25-15:51/26	17:54 16:23-16:51/28	19:59 19:09-19:27/18	21:01	21:55
6	08:46	08:02 16:02-16:20/18 09:00-09:26/26	06:56 17:10-17:27/17	06:33 18:18-18:59/41	05:19 18:59-19:36/37	04:29 20:54-21:16/22
	15:53	16:54 15:26-15:50/24	17:56 16:24-16:51/27	20:01 19:08-19:29/21	21:03	21:57
7	08:46	08:00 16:02-16:22/20 09:00-09:26/26	06:53 17:09-17:30/21	06:31 18:18-18:58/40	05:17 18:59-19:35/36	04:28 20:54-21:17/23
	15:55	16:57 15:27-15:50/23	17:58 16:25-16:49/24	20:03 19:06-19:29/23	21:05	21:58
8	08:45	07:58 16:00-16:22/22 09:01-09:26/25	06:51 17:08-17:32/24	06:28 18:17-18:57/40	05:15 19:00-19:34/34	04:28 20:54-21:17/23
	15:56	16:59 15:27-15:49/22	18:01 16:26-16:47/21	20:05 19:04-19:30/26	21:07	21:59
9	08:44	07:56 16:00-16:23/23 09:01-09:24/23	06:48 17:07-17:33/26	06:26 18:18-18:57/39	05:13 19:01-19:33/32	04:27 20:53-21:17/24
	15:58	17:01 15:29-15:48/19	18:03 16:27-16:45/18	20:07 19:04-19:31/27	21:09	22:00
10	08:44	07:54 16:00-16:24/24 09:03-09:24/21	06:45 17:07-17:34/27	06:23 18:18-18:55/37	05:11 19:02-19:32/30	04:26 20:54-21:17/23
	15:59	17:03 15:31-15:47/16	18:05 16:31-16:42/11	20:10 19:03-19:31/28	21:11	22:01
11	08:43	07:52 15:59-16:24/25 09:03-09:22/19	06:43 17:06-17:37/31	06:20 18:19-18:55/36	05:09 19:03-19:31/28	04:26 20:54-21:18/24
	16:01	17:06 15:33-15:44/11 08:20-08:29/9	18:07	20:12 19:03-19:31/28	21:13	22:02
12	08:42	07:50 15:59-16:24/25 08:18-08:32/14	06:40 17:05-17:40/35	06:18 18:19-18:53/34	05:07 19:04-19:29/25	04:25 20:54-21:18/24
	16:03	17:08 09:06-09:20/14	18:09	20:14 19:02-19:31/29	21:15	22:03
13	08:41	07:47 15:59-16:24/25 08:17-08:34/17	06:37 17:06-17:43/37	06:15 18:21-18:53/32	05:05 19:07-19:29/22	04:25 20:54-21:19/25
	16:04	17:10 09:09-09:18/9	18:11	20:16 19:02-19:31/29	21:17	22:03
14	08:40	07:45 15:59-16:24/25	06:35 17:06-17:45/39	06:13 18:21-18:51/30	05:03 19:08-19:27/19	04:24 20:54-21:19/25
	16:06	17:12 08:15-08:34/19	18:13	20:18 19:01-19:32/31	21:19	22:04
15	08:39	07:43 16:00-16:24/24	06:32 17:06-17:47/41	06:10 18:23-18:49/26	05:01 19:11-19:24/13	04:24 20:55-21:20/25
	16:08	17:15 08:15-08:35/20	18:15	20:20 19:02-19:34/32	21:21	22:05
16	08:38	07:40 16:00-16:23/23	06:29 17:07-17:49/42	06:07 18:24-18:47/23	04:59 19:15-19:19/4	04:24 20:54-21:19/25
	16:10	17:17 08:14-08:35/21	18:18	20:22 19:01-19:35/34	21:23	22:05
17	08:36	07:38 16:01-16:23/22 08:14-08:36/22	06:27 17:08-17:51/43	06:05 18:27-18:45/18	04:57	04:24 20:54-21:19/25
	16:12	17:19 16:39-16:48/9	18:20	20:24 19:02-19:37/35	21:25	22:06
18	08:35	07:36 16:02-16:22/20 08:13-08:35/22	06:24 17:09-17:53/44	06:02 18:30-18:40/10	04:55	04:23 20:54-21:20/26
	16:14	17:21 16:36-16:50/14	18:22	20:26 19:02-19:37/35	21:27	22:06
19	08:34	07:33 16:03-16:21/18 08:14-08:36/22	06:21 17:11-17:56/45	06:00 19:01-19:38/37	04:53	04:23 20:54-21:20/26
	16:16	17:24 16:32-16:53/21	18:24	20:28	21:29	22:07
20	08:32 15:33-15:36/3	07:31 16:05-16:19/14 08:13-08:35/22	06:19 17:12-17:58/46	05:57 19:00-19:38/38	04:52	04:23 20:56-21:21/25
	16:18	17:26 16:29-16:54/25	18:26	20:30	21:31	22:07
21	08:31 15:30-15:40/10	07:28 16:08-16:16/8 08:14-08:35/21	06:16 17:14-17:58/44	05:55 18:59-19:39/40	04:50	04:24 20:56-21:21/25
	16:20	17:28 16:28-16:55/27	18:28	20:32	21:32	22:08
22	08:30 15:28-15:42/14	07:26 16:26-16:55/29	06:13 17:14-17:58/44	05:52 18:59-19:40/41	04:48	04:24 20:56-21:21/25
	16:22	17:30 08:15-08:34/19	18:30	20:34	21:34	22:08
23	08:28 15:27-15:44/17	07:24 16:25-16:55/30	06:11 17:15-17:59/44	05:50 18:57-19:39/42	04:47	04:24 20:56-21:21/25
	16:24 09:05-09:15/10	17:32 08:16-08:33/17	18:32	20:37	21:36	22:08
24	08:26 15:26-15:45/19	07:21 16:24-16:56/32	06:08 17:16-17:59/43	05:47 18:57-19:40/43	04:45	04:24 20:56-21:22/26
	16:26 09:03-09:17/14	17:35 08:17-08:31/14	18:34	20:39	21:38	22:08
25	08:25 15:25-15:46/21	07:19 16:23-16:55/32	06:05 17:16-17:58/42	05:45 18:57-19:40/43	04:43	04:25 20:56-21:21/25
	16:28 09:02-09:19/17	17:37 08:19-08:28/9	18:36	20:41	21:39	22:08
26	08:23 15:25-15:47/22	07:16 16:23-16:56/33	06:03 17:19-17:58/39	05:42 18:56-19:39/43	04:42	04:25 20:57-21:22/25
	16:30 09:01-09:20/19	17:39	18:38	20:43	21:41	22:08
27	08:22 15:24-15:48/24	07:14 16:22-16:55/33	06:00 17:21-17:57/36	05:40 18:56-19:40/44	04:41	04:26 20:57-21:22/25
	16:32 09:01-09:22/21	17:41	18:40	20:45	21:43	22:08
28	08:20 15:24-15:49/25	07:11 16:22-16:53/31	05:57 17:24-17:57/33	05:38 18:56-19:40/44	04:39 21:00-21:06/6	04:26 20:58-21:22/24
	16:35 09:00-09:23/23	17:43	18:43	20:47	21:44	22:08
29	08:18 15:24-15:49/25		06:55 18:23-18:58/35	05:35 18:56-19:40/44	04:38 20:58-21:08/10	04:27 20:57-21:22/25
	16:37 08:59-09:23/24		19:45	20:49	21:46	22:07
30	08:16 15:24-15:50/26		06:52 18:22-18:58/36	05:33 18:56-19:39/43	04:37 20:57-21:09/12	04:28 20:58-21:22/24
	16:39 08:59-09:24/25		19:47	20:51	21:47	22:07
31	08:14 15:24-15:50/26		06:49 18:20-18:59/39		04:35 20:56-21:10/14	
	16:41 08:59-09:25/26		19:49		21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	411	1491	1232	1518	526	710

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: Pr3b - VESTAS V172-7.2 7200 172.0 !OI hub: 175,0 m (TOT: 261,0 m) (36)  
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 20:58-21:23/25 22:07	05:14 19:14-19:40/26 21:26	06:15 18:18-18:54/36 20:12 19:01-19:30/29	07:15 17:45-18:21/36 18:52	07:20 15:30-15:54/24 08:32-08:53/21 16:34 15:00-15:17/17	08:22 15:43
2	04:29 20:58-21:22/24 22:06	05:16 19:13-19:42/29 21:24	06:17 18:17-18:54/37 20:09 19:02-19:30/28	07:17 17:45-18:17/32 18:49	07:23 15:30-15:53/23 08:31-08:54/23 16:32 14:58-15:18/20	08:24 15:42
3	04:30 20:59-21:22/23 22:06	05:18 19:12-19:43/31 21:21	06:19 18:16-18:55/39 20:07 19:02-19:29/27	07:19 17:44-18:13/29 18:46 17:11-17:18/7	07:25 15:30-15:52/22 08:30-08:54/24 16:30 14:57-15:19/22	08:25 15:41
4	04:31 20:59-21:22/23 22:05	05:20 19:11-19:44/33 21:19	06:21 18:15-18:55/40 20:04 19:02-19:28/26	07:21 17:44-18:11/27 18:44 17:06-17:22/16	07:27 15:32-15:51/19 08:30-08:56/26 16:28 14:57-15:20/23	08:27 15:41
5	04:32 21:00-21:22/22 22:04	05:22 19:10-19:45/35 21:17	06:23 18:14-18:54/40 20:01 19:02-19:26/24	07:23 17:45-18:10/25 18:41 17:04-17:23/19	07:29 15:32-15:50/18 08:29-08:56/27 16:25 14:55-15:20/25	08:28 15:40
6	04:33 21:00-21:22/22 22:04	05:23 19:08-19:45/37 21:15	06:25 18:13-18:54/41 19:59 19:03-19:24/21	07:25 17:45-18:07/22 18:38 17:01-17:25/24	07:31 15:34-15:49/15 08:30-08:56/26 16:23 14:56-15:21/25	08:30 15:39
7	04:34 21:01-21:22/21 22:03	05:25 19:08-19:46/38 21:13	06:27 18:13-18:54/41 19:56 19:04-19:22/18	07:27 17:46-18:05/19 18:36 17:00-17:25/25	07:33 15:36-15:46/10 08:29-08:56/27 16:21 14:55-15:21/26	08:31 15:39
8	04:35 21:01-21:22/21 22:02	05:27 19:07-19:46/39 21:11	06:29 18:13-18:53/40 19:53 19:07-19:19/12	07:29 17:46-18:02/16 18:33 16:58-17:26/28	07:36 14:54-15:21/27 16:19 08:29-08:56/27	08:33 15:38
9	04:36 21:02-21:21/19 22:01	05:29 19:07-19:47/40 21:08	06:31 18:12-18:53/41 19:51	07:32 17:47-17:59/12 18:30 16:57-17:26/29	07:38 14:55-15:22/27 16:17 08:30-08:57/27	08:34 15:37
10	04:38 21:02-21:21/19 22:00	05:31 19:06-19:47/41 21:06	06:33 18:12-18:52/40 19:48	07:34 17:49-17:56/7 18:28 16:56-17:26/30	07:40 14:55-15:22/27 16:15 08:29-08:56/27	08:36 15:37
11	04:39 21:04-21:21/17 21:59	05:33 19:05-19:47/42 21:04	06:35 18:12-18:52/40 19:45	07:36 16:56-17:27/31 18:25	07:42 14:56-15:22/26 16:13 08:30-08:56/26	08:37 15:37
12	04:40 21:04-21:19/15 21:58	05:35 19:04-19:47/43 21:02	06:37 18:13-18:51/38 19:43	07:38 16:56-17:27/31 18:23	07:44 14:56-15:22/26 16:11 08:31-08:56/25	08:38 15:36
13	04:42 21:05-21:18/13 21:57	05:37 19:04-19:47/43 20:59	06:39 18:13-18:50/37 19:40	07:40 16:55-17:27/32 18:20	07:46 14:56-15:21/25 16:09 08:31-08:55/24	08:39 15:36
14	04:43 21:06-21:17/11 21:55	05:39 19:04-19:47/43 20:57	06:41 18:13-18:49/36 19:37	07:42 16:55-17:27/32 18:18	07:48 14:57-15:22/25 16:08 08:32-08:55/23	08:40 15:36
15	04:45 21:08-21:16/8 21:54	05:41 19:04-19:47/43 20:55	06:43 18:14-18:48/34 19:35	07:44 16:54-17:27/33 18:15	07:51 14:57-15:21/24 16:06 08:33-08:54/21	08:41 15:36
16	04:46 21:11-21:14/3 21:53	05:43 19:04-19:47/43 20:52	06:45 18:12-18:47/35 19:32	07:46 16:55-17:28/33 18:12	07:53 14:58-15:20/22 16:04 08:35-08:54/19	08:42 15:36
17	04:48 21:51	05:45 19:04-19:47/43 20:50	06:47 18:08-18:47/39 19:29	07:48 16:55-17:27/32 18:10 08:50-09:01/11	07:55 14:59-15:20/21 16:02 08:36-08:53/17	08:43 15:36
18	04:49 21:50	05:47 19:03-19:46/43 20:47	06:49 18:04-18:46/42 19:26	07:50 16:56-17:27/31 18:07 08:48-09:03/15	07:57 15:00-15:19/19 16:01 08:37-08:51/14	08:44 15:36
19	04:51 21:49	05:49 19:03-19:45/42 20:45	06:51 18:02-18:45/43 19:24	07:52 16:56-17:26/30 18:05 08:46-09:04/18	07:59 15:01-15:18/17 15:59 08:40-08:50/10	08:45 15:37
20	04:52 21:47	05:51 19:03-19:45/42 20:42	06:53 18:01-18:45/44 19:21	07:54 16:58-17:26/28 18:02 08:46-09:05/19	08:01 15:03-15:17/14 15:57	08:45 15:37
21	04:54 21:46	05:53 19:03-19:44/41 20:40	06:55 18:00-18:44/44 19:18	07:57 16:37-16:47/10 08:44-09:05/21 18:00 16:59-17:25/26	08:03 15:05-15:16/11 15:56	08:46 15:37
22	04:56 21:44	05:55 19:04-19:44/40 20:37	06:57 17:59-18:43/44 19:16	07:59 16:34-16:49/15 08:44-09:05/21 17:58 17:00-17:24/24	08:05 15:09-15:12/3 15:54	08:47 15:38
23	04:57 21:42	05:57 19:04-19:43/39 20:35	06:59 17:56-18:42/46 19:13	08:01 16:32-16:51/19 08:44-09:06/22 17:55 17:03-17:22/19	08:07 15:53	08:47 15:38
24	04:59 21:41	05:59 19:05-19:42/37 20:32	07:01 17:54-18:40/46 19:10	08:03 16:32-16:52/20 08:43-09:06/23 17:53 17:07-17:20/13	08:09 15:51	08:48 15:39
25	05:01 21:39	06:01 18:33-18:44/11 20:30 19:06-19:41/35	07:03 17:52-18:37/45 19:08	07:05 15:30-15:53/23 07:43-08:05/22 16:50 16:09-16:17/8	08:11 15:50	08:48 15:39
26	05:03 21:37	06:03 18:28-18:47/19 20:27 19:04-19:38/34	07:05 17:50-18:34/44 19:05	07:07 15:29-15:53/24 16:48 07:44-08:05/21	08:13 15:49	08:48 15:40
27	05:05 21:35	06:05 18:26-18:49/23 20:25 19:03-19:37/34	07:07 17:48-18:31/43 19:02	07:09 15:29-15:54/25 16:46 07:44-08:04/20	08:15 15:48	08:48 15:41
28	05:06 19:24-19:33/9 21:33	06:07 18:24-18:50/26 20:22 19:02-19:35/33	07:09 17:47-18:29/42 19:00	07:12 15:29-15:54/25 16:43 07:45-08:03/18	08:16 15:46	08:49 15:42
29	05:08 19:20-19:35/15 21:31	06:09 18:22-18:52/30 20:20 19:02-19:32/30	07:11 17:46-18:26/40 18:57	07:14 15:28-15:53/25 07:46-08:03/17 16:41 08:38-08:48/10	08:18 15:45	08:49 15:43
30	05:10 19:18-19:38/20 21:30	06:11 18:20-18:53/33 20:17 19:02-19:31/29	07:13 17:45-18:23/38 18:54	07:16 15:29-15:54/25 08:35-08:50/15 16:39 15:06-15:11/5 07:48-08:01/13	08:20 15:44	08:49 15:44
31	05:12 19:16-19:40/24 21:28	06:13 18:19-18:53/34 20:14 19:02-19:31/29		07:18 15:29-15:53/24 08:33-08:52/19 16:36 15:02-15:14/12 07:50-07:58/8		08:48 15:45
Potential sun hours	529	469	384	324	248	217
Sum of minutes with flicker	354	1333	1400	1371	1037	0

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

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

Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: PrRR3 - VESTAS V172-7.2 7200 172.0 !OI hub: 175,0 m (TOT: 261,0 m) (34)  
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 10:02-10:38/36 15:46	08:12 16:43	07:09 17:06-17:17/11 15:53-16:16/23 17:46 16:29-17:01/32 07:53-08:21/28	06:47 18:04-19:19/75 19:51	05:31 20:53	04:34 19:44-20:36/52 21:50
2	08:48 10:02-10:38/36 15:48	08:11 16:46	07:06 17:04-17:18/14 15:55-16:14/19 17:48 16:29-17:01/32 07:53-08:20/27	06:44 18:04-19:19/75 19:53	05:28 20:55	04:33 19:44-20:36/52 21:52
3	08:48 10:03-10:39/36 15:49	08:09 16:48	07:04 17:02-17:20/18 15:59-16:11/12 17:50 16:28-17:00/32 07:53-08:20/27	06:41 18:04-19:20/76 19:55	05:26 20:57	04:32 19:44-20:35/51 21:53
4	08:47 10:03-10:38/35 15:50	08:07 16:50	07:01 17:02-17:23/21 07:53-08:19/26 17:52 16:28-17:01/33 07:27-07:36/9	06:39 18:04-19:28/84 19:57	05:24 20:59	04:31 19:45-20:36/51 21:54
5	08:47 10:04-10:38/34 15:52	08:05 16:52	06:58 17:01-17:24/23 07:53-08:18/25 17:54 16:28-17:00/32 07:24-07:37/13	06:36 18:44-19:30/46 19:59	05:22 21:01	04:30 19:45-20:36/51 21:55
6	08:46 10:05-10:38/33 15:53	08:02 16:54	06:56 16:29-17:24/55 07:22-07:39/17 17:56 07:55-08:17/22	06:33 18:46-19:32/46 20:01	05:19 20:19-20:22/3 21:03	04:29 19:45-20:35/50 21:57
7	08:46 10:06-10:37/31 15:55	08:00 16:01-16:10/9 16:57	06:53 17:00-17:24/24 07:56-08:15/19 17:58 16:29-16:59/30 07:21-07:40/19	06:31 18:45-19:32/47 20:03	05:17 20:14-20:27/13 21:05	04:28 19:45-20:36/51 21:58
8	08:45 10:06-10:27/21 15:56	07:58 15:57-16:13/16 16:59	06:51 17:00-17:26/26 07:57-08:13/16 18:01 16:29-16:58/29 07:19-07:40/21	06:28 18:45-19:33/48 20:05	05:15 20:12-20:29/17 21:07	04:27 19:45-20:36/51 21:59
9	08:44 10:07-10:27/20 15:58	07:56 15:55-16:16/21 17:01	06:48 17:00-17:30/30 08:00-08:10/10 18:03 16:29-16:57/28 07:19-07:41/22	06:26 18:46-19:34/48 20:07	05:13 20:10-20:30/20 21:09	04:27 19:45-20:35/50 22:00
10	08:44 10:08-10:27/19 15:59	07:54 15:54-16:18/24 17:03	06:45 17:01-17:37/36 07:19-07:40/21 18:05 16:31-16:56/25	06:23 18:46-19:35/49 20:10	05:11 20:09-20:31/22 21:11	04:26 19:45-20:36/51 22:01
11	08:43 10:08-10:26/18 16:01	07:52 15:52-16:19/27 17:06	06:43 17:01-17:39/38 07:18-07:40/22 18:07 16:32-16:54/22	06:20 18:47-19:41/54 20:12	05:09 20:00-20:32/32 21:13	04:26 19:46-20:37/51 22:02
12	08:42 10:10-10:25/15 16:03	07:50 16:28-16:36/8 17:08	06:40 17:02-17:40/38 07:19-07:40/21 18:09 16:33-16:52/19	06:18 18:48-19:42/54 20:14	05:07 19:57-20:33/36 21:15	04:25 19:46-20:36/50 22:03
13	08:41 10:11-10:25/14 16:04	07:47 16:25-16:38/13 17:10	06:37 17:05-17:43/38 07:19-07:39/20 18:11 16:36-16:50/14	06:15 18:50-19:44/54 20:16	05:05 19:56-20:33/37 21:17	04:25 19:46-20:37/51 22:03
14	08:40 10:13-10:24/11 16:06	07:45 16:24-16:41/17 17:12	06:35 17:07-17:44/37 18:13 07:19-07:37/18	06:13 18:51-19:45/54 20:18	05:03 19:54-20:35/41 21:19	04:24 19:46-20:37/51 22:04
15	08:39 10:15-10:22/7 16:08	07:43 16:24-16:43/19 17:15	06:32 17:06-17:44/38 18:15 07:21-07:36/15	06:10 18:53-19:46/53 20:20	05:01 19:52-20:35/43 21:21	04:24 19:47-20:38/51 22:05
16	08:38 16:10	07:40 15:48-16:44/56 17:17	06:29 17:06-17:45/39 18:18 07:22-07:34/12	06:07 18:54-19:46/52 20:22	04:59 19:51-20:35/44 21:23	04:24 19:46-20:37/51 22:05
17	08:36 16:12	07:38 15:48-16:44/56 17:19	06:27 17:05-17:44/39 18:20 07:26-07:29/3	06:05 18:56-19:47/51 20:24	04:57 19:50-20:36/46 21:25	04:24 19:46-20:37/51 22:06
18	08:35 16:14	07:36 15:47-16:44/57 17:21	06:24 17:04-17:44/40 18:22	06:02 18:58-19:46/48 20:26	04:55 19:49-20:36/47 21:27	04:23 19:47-20:38/51 22:07
19	08:34 16:16	07:33 15:48-16:45/57 17:24	06:21 17:05-17:43/38 18:24	06:00 19:01-19:46/45 20:28	04:53 19:48-20:36/48 21:29	04:23 19:47-20:38/51 22:07
20	08:32 16:18	07:31 15:47-16:44/57 17:26	06:19 17:05-17:42/37 18:26	05:57 19:01-19:46/45 20:30	04:52 19:48-20:36/48 21:31	04:23 19:48-20:39/51 22:07
21	08:31 16:20	07:28 15:48-16:49/61 17:28	06:16 17:05-17:43/38 18:28	05:55 19:01-19:46/45 20:32	04:50 19:47-20:36/49 21:32	04:24 19:48-20:39/51 22:08
22	08:30 16:22	07:26 15:47-16:53/66 17:30	06:13 17:05-17:44/39 18:30	05:52 19:02-19:46/44 20:34	04:48 19:47-20:37/50 21:34	04:24 19:48-20:39/51 22:08
23	08:28 16:24	07:24 15:47-16:55/68 17:32	06:11 17:52-18:04/12 18:32	05:50 19:02-19:44/42 20:37	04:47 19:46-20:37/51 21:36	04:24 19:48-20:39/51 22:08
24	08:26 16:26	07:21 16:23-16:57/34 07:56-08:19/23 17:35	06:08 17:49-18:06/17 18:34	05:47 19:03-19:44/41 20:39	04:45 19:45-20:36/51 21:38	04:24 19:49-20:40/51 22:08
25	08:25 16:28	07:19 16:24-16:58/34 07:54-08:20/26 17:37	06:05 17:47-18:07/20 18:36	05:45 19:04-19:43/39 20:41	04:43 19:45-20:37/52 21:39	04:25 19:49-20:39/50 22:08
26	08:23 16:30	07:16 16:27-17:00/33 07:54-08:21/27 17:39	06:03 17:07-18:09/62 18:38	05:42 19:05-19:42/37 20:43	04:42 19:45-20:37/52 21:41	04:25 19:48-20:39/51 22:08
27	08:22 16:32	07:14 16:31-17:00/29 07:53-08:20/27 17:41	06:00 17:06-18:09/63 18:40	05:40 19:07-19:41/34 20:45	04:40 19:45-20:36/51 21:43	04:26 19:49-20:40/51 22:08
28	08:20 16:35	07:11 17:09-17:14/5 15:51-16:18/27 17:43	05:57 17:05-18:11/66 18:43	05:38 19:09-19:39/30 20:47	04:39 19:44-20:36/52 21:44	04:26 19:50-20:40/50 22:08
29	08:18 16:37		06:55 18:05-19:13/68 19:45	05:35 19:24-19:37/13 20:49	04:38 19:44-20:36/52 21:46	04:27 19:49-20:40/51 22:07
30	08:16 16:39		06:52 18:05-19:14/69 19:47	05:33 19:27-19:33/6 20:51	04:36 19:44-20:36/52 21:47	04:27 19:50-20:41/51 22:07
31	08:14 16:41		06:49 18:04-19:16/72 19:49		04:35 19:44-20:36/52 21:49	
Potential sun hours	236	266	366	426	507	528
Sum of minutes with flicker	376	1275	2097	1705	1061	1527

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

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



Project:

Flickering\_Vestas\_V172\_Prikuli\_B

Licensed user:

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
16.07.2025 09:20/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_V172\_Prikuli\_B WTG: PrRR3 - VESTAS V172-7.2 7200 172.0 !O! hub: 175,0 m (TOT: 261,0 m) (34)  
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 19:50-20:41/51	05:14 20:09-20:43/34	06:15 18:46-19:40/54	07:15 17:43-18:20/37 07:58-08:19/21	07:20 15:24-15:47/23	08:22 09:51-10:08/17
2	22:07	21:26	20:12 18:10-18:34/24	18:52 17:14-17:31/17	16:34	15:43
2	04:29 19:50-20:40/50	05:16 20:12-20:42/30	06:17 18:45-19:33/48	07:17 17:41-18:19/38 07:57-08:19/22	07:23 15:25-15:45/20	08:24 09:50-10:09/19
2	22:06	21:24	20:09 18:07-18:36/29	18:49 17:11-17:33/22	16:32	15:42
3	04:30 19:50-20:41/51	05:18 20:19-20:41/22	06:19 18:44-19:32/48	07:19 17:39-18:16/37 07:57-08:18/21	07:25 15:27-15:42/15	08:25 09:50-10:10/20
2	22:06	21:21	20:07 18:06-18:37/31	18:46 17:09-17:34/25	16:30	15:41
4	04:31 19:50-20:41/51	05:20 20:21-20:40/19	06:21 18:43-19:31/48	07:21 17:38-18:09/31 08:40-08:44/4	07:27 15:32-15:39/7	08:27 09:51-10:11/20
2	22:05	21:19	20:04 18:04-18:38/34	18:44 17:08-17:34/26 07:56-08:18/22	16:27	15:41 10:13-10:20/7
5	04:32 19:51-20:41/50	05:21 20:22-20:37/15	06:23 18:41-19:29/48	07:23 17:37-18:06/29 08:35-08:49/14	07:29	08:28 09:51-10:22/31
2	22:04	21:17	20:01 18:02-18:38/36	18:41 17:06-17:35/29 07:56-08:17/21	16:25	15:40
6	04:33 19:51-20:41/50	05:23 20:25-20:35/10	06:25 18:41-19:27/46	07:25 17:36-18:00/24 08:33-08:50/17	07:31	08:30 09:50-10:23/33
2	22:04	21:15	19:59 18:01-18:38/37	18:38 17:05-17:35/30 07:56-08:16/20	16:23	15:39
7	04:34 19:51-20:42/51	05:25	06:27 18:40-19:25/45	07:27 17:36-18:00/24 08:31-08:52/21	07:33	08:31 09:51-10:25/34
2	22:03	21:13	19:56 18:00-18:39/39	18:36 17:04-17:35/31 07:57-08:15/18	16:21	15:38
8	04:35 19:51-20:42/51	05:27	06:29 17:59-19:22/83	07:29 17:36-17:59/23 08:29-08:52/23	07:36	08:33 09:51-10:26/35
2	22:02	21:11	19:53	18:33 17:03-17:35/32 07:58-08:14/16	16:19	15:38
9	04:36 19:52-20:43/51	05:29	06:31 17:58-19:18/80	07:31 17:36-17:58/22 08:28-08:53/25	07:38	08:34 09:51-10:27/36
2	22:01	21:08	19:51	18:30 17:03-17:35/32 08:01-08:12/11	16:17	15:37
10	04:38 19:52-20:43/51	05:31	06:33 17:57-19:13/76	07:34 17:36-17:56/20 16:35-16:41/6 08:03-08:09/6	07:40	08:36 09:52-10:28/36
2	22:00	21:06	19:48	18:28 17:02-17:35/33 08:28-08:54/26	16:15	15:37
11	04:39 19:53-20:43/50	05:33	06:35 17:57-19:11/74	07:36 17:38-17:54/16 16:31-16:47/16	07:42	08:37 09:52-10:28/36
2	21:59	21:04	19:45	18:25 17:03-17:35/32 08:27-08:54/27	16:13	15:37
12	04:40 19:53-20:44/51	05:35	06:37 17:56-19:09/73	07:38 17:39-17:51/12 16:28-16:49/21	07:44	08:38 09:52-10:29/37
2	21:58	21:02	19:43	18:23 17:03-17:35/32 08:26-08:54/28	16:11	15:36
13	04:42 19:53-20:45/52	05:37 19:34-19:42/8	06:39 17:56-19:06/70	07:40 17:40-17:48/8 16:25-16:50/25	07:46	08:39 09:52-10:29/37
2	21:57	20:59	19:40	18:20 17:03-17:34/31 08:26-08:54/28	16:09	15:36
14	04:43 19:53-20:45/52	05:39 19:31-19:45/14	06:41 17:56-19:04/68	07:42 17:00-17:33/30 08:26-08:53/27	07:48	08:40 09:53-10:31/38
2	21:55	20:57 19:19-19:28/9	19:37	18:17 16:23-16:51/28	16:08	15:36
15	04:44 19:54-20:46/52	05:41 19:16-19:47/31	06:43 17:56-19:02/66	07:44 17:03-17:32/33 08:26-08:53/27	07:51	08:41 09:54-10:31/37
2	21:54	20:55	19:35	18:15 16:22-16:52/30	16:06	15:36
16	04:46 19:54-20:46/52	05:43 19:14-19:48/34	06:45 17:56-18:59/63	07:46 16:58-17:31/33 08:26-08:52/26	07:53	08:42 09:54-10:32/38
2	21:53	20:52	19:32	18:12 16:21-16:53/32	16:04	15:36
17	04:48 19:54-20:45/51	05:45 19:12-19:48/36	06:47 17:56-18:57/61	07:48 16:56-17:30/34 08:27-08:51/24	07:55	08:43 09:55-10:33/38
2	21:52	20:50	19:29	18:10 16:20-16:53/33	16:02	15:36
18	04:49 19:55-20:46/51	05:47 19:10-19:49/39	06:49 17:56-18:55/59	07:50 16:19-17:28/69	07:57	08:44 09:54-10:32/38
2	21:50	20:47	19:26	18:07 08:27-08:50/23	16:01	15:36
19	04:51 19:55-20:46/51	05:49 19:08-19:50/42	06:51 18:36-18:53/17	07:52 16:18-17:25/67	07:59	08:45 09:55-10:33/38
2	21:49	20:45	19:24 17:54-18:33/39	18:05 08:28-08:49/21	15:59	15:37
20	04:52 19:56-20:47/51	05:51 19:07-19:50/43	06:53 18:37-18:50/13	07:54 16:18-17:23/65	08:01	08:45 09:56-10:34/38
2	21:47	20:42	19:21 17:52-18:31/39	18:02 08:30-08:48/18	15:57	15:37
21	04:54 19:56-20:46/50	05:53 19:07-19:50/43	06:55 18:41-18:46/5	07:57 16:18-17:15/57	08:03	08:46 09:56-10:34/38
2	21:46	20:40	19:18 17:51-18:30/39	18:00 08:32-08:45/13	15:56	15:37
22	04:56 19:57-20:47/50	05:55 19:06-19:50/44	06:57 17:50-18:28/38	07:59 16:17-17:15/58	08:05	08:47 09:56-10:35/39
2	21:44	20:37	19:16	17:57 08:35-08:41/6	15:54	15:38
23	04:57 19:57-20:46/49	05:57 19:05-19:50/45	06:59 17:49-18:26/37	08:01 16:17-17:14/57	08:07	08:47 09:57-10:35/38
2	21:42	20:35	19:13	17:55	15:53	15:38
24	04:59 19:58-20:47/49	05:59 19:05-19:50/45	07:01 17:48-18:26/38	08:03 16:18-17:15/57	08:09	08:48 09:58-10:36/38
2	21:41	20:32	19:10	17:53	15:51	15:39
25	05:01 19:59-20:47/48	06:01 19:01-19:50/49	07:03 17:47-18:26/39	07:05 15:18-16:14/56	08:11	08:48 09:58-10:36/38
2	21:39	20:30	19:08	16:50	15:50	15:39
26	05:03 20:00-20:46/46	06:03 18:57-19:48/51	07:05 17:47-18:26/39	07:07 15:18-16:13/55	08:13	08:48 09:58-10:37/39
2	21:37	20:27	19:05	16:48	15:49	15:40
27	05:04 20:01-20:46/45	06:05 18:55-19:48/53	07:07 17:46-18:26/40	07:09 15:53-16:12/19	08:15 09:54-10:01/7	08:48 09:59-10:37/38
2	21:35	20:25	19:02 08:05-08:15/10	16:46 15:19-15:52/33	15:48	15:41
28	05:06 20:02-20:46/44	06:07 18:54-19:47/53	07:09 17:46-18:25/39	07:12 15:54-16:10/16	08:16 09:53-10:03/10	08:49 09:59-10:37/38
2	21:33	20:22	19:00 08:02-08:17/15	16:43 15:19-15:51/32	15:46	15:42
29	05:08 20:03-20:45/42	06:09 18:52-19:46/54	07:11 17:46-18:24/38	07:14 15:55-16:07/12	08:18 09:52-10:05/13	08:49 10:00-10:38/38
2	21:31	20:20	18:57 08:01-08:18/17	16:41 15:19-15:50/31	15:45	15:43
30	05:10 20:05-20:45/40	06:11 18:50-19:44/54	07:13 17:45-18:23/38 07:59-08:18/19	07:16 15:58-16:05/7	08:20 09:51-10:06/15	08:49 10:01-10:38/37
2	21:30	20:17 18:16-18:29/13	18:54 17:17-17:27/10	16:39 15:21-15:49/28	15:44	15:44
31	05:12 20:07-20:44/37	06:13 18:48-19:42/54		07:18 15:22-15:48/26		08:49 10:01-10:38/37
2	21:28	20:14 18:12-18:32/20		16:36		15:45
Potential sun hours	529	469	384	324	248	217
Sum of minutes with flicker	1520	964	1909	2334	110	1081

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

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