

Project:

Flickering\_Vestas\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: AP2 - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 m) (30)  
Sunshine probability S (Average daily sunshine hours) []

Assumptions for shadow calculations

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

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

|                             | January                       | February                      | March                         | April                         | May                           | June           |
|-----------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|----------------|
| 1                           | 08:48 10:05-10:22/17<br>15:46 | 08:12<br>16:43                | 07:09 16:51-17:13/22<br>17:46 | 06:47<br>19:51                | 05:31 19:55-20:18/23<br>20:53 | 04:34<br>21:50 |
| 2                           | 08:48 10:06-10:21/15<br>15:48 | 08:11<br>16:46                | 07:06 16:50-17:13/23<br>17:48 | 06:44 19:21-19:24/3<br>19:53  | 05:28 19:55-20:19/24<br>20:55 | 04:33<br>21:52 |
| 3                           | 08:48 10:07-10:22/15<br>15:49 | 08:09<br>16:48                | 07:04 16:50-17:12/22<br>17:50 | 06:41 19:18-19:26/8<br>19:55  | 05:26 19:55-20:19/24<br>20:57 | 04:32<br>21:53 |
| 4                           | 08:47 10:08-10:22/14<br>15:50 | 08:07<br>16:50                | 07:01 16:51-17:12/21<br>17:52 | 06:39 19:17-19:29/12<br>19:57 | 05:24 19:54-20:19/25<br>20:59 | 04:31<br>21:54 |
| 5                           | 08:47 10:08-10:21/13<br>15:52 | 08:05<br>16:52                | 06:58 16:50-17:11/21<br>17:54 | 06:36 19:16-19:30/14<br>19:59 | 05:22 19:54-20:20/26<br>21:01 | 04:30<br>21:55 |
| 6                           | 08:46 10:10-10:22/12<br>15:53 | 08:02<br>16:55                | 06:56 16:52-17:11/19<br>17:56 | 06:34 19:16-19:33/17<br>20:01 | 05:19 19:54-20:19/25<br>21:03 | 04:29<br>21:57 |
| 7                           | 08:46 10:12-10:21/9<br>15:55  | 08:00<br>16:57                | 06:53 16:52-17:09/17<br>17:59 | 06:31 19:15-19:34/19<br>20:03 | 05:17 19:54-20:19/25<br>21:05 | 04:28<br>21:58 |
| 8                           | 08:45 10:13-10:20/7<br>15:56  | 07:58<br>16:59                | 06:51 16:53-17:07/14<br>18:01 | 06:28 19:14-19:33/19<br>20:05 | 05:15 19:54-20:19/25<br>21:07 | 04:28<br>21:59 |
| 9                           | 08:44<br>15:58                | 07:56<br>17:01                | 06:48 16:55-17:04/9<br>18:03  | 06:26 19:14-19:39/25<br>20:08 | 05:13 19:55-20:19/24<br>21:09 | 04:27<br>22:00 |
| 10                          | 08:44<br>15:59                | 07:54<br>17:04                | 06:45<br>18:05                | 06:23 19:14-19:40/26<br>20:10 | 05:11 19:55-20:18/23<br>21:11 | 04:26<br>22:01 |
| 11                          | 08:43<br>16:01                | 07:52<br>17:06                | 06:43<br>18:07                | 06:20 19:15-19:43/28<br>20:12 | 05:09 19:55-20:17/22<br>21:13 | 04:26<br>22:02 |
| 12                          | 08:42<br>16:03                | 07:50<br>17:08                | 06:40<br>18:09                | 06:18 19:16-19:44/28<br>20:14 | 05:07 19:56-20:16/20<br>21:15 | 04:25<br>22:03 |
| 13                          | 08:41<br>16:05                | 07:47<br>17:10                | 06:37<br>18:11                | 06:15 19:18-19:46/28<br>20:16 | 05:05 19:57-20:16/19<br>21:17 | 04:25<br>22:03 |
| 14                          | 08:40<br>16:06                | 07:45<br>17:12                | 06:35<br>18:13                | 06:13 19:23-19:45/22<br>20:18 | 05:03 19:58-20:15/17<br>21:19 | 04:24<br>22:04 |
| 15                          | 08:39<br>16:08                | 07:43 16:38-16:44/6<br>17:15  | 06:32<br>18:16                | 06:10 19:23-19:46/23<br>20:20 | 05:01 19:59-20:13/14<br>21:21 | 04:24<br>22:05 |
| 16                          | 08:38<br>16:10                | 07:40 16:35-16:46/11<br>17:17 | 06:30<br>18:18                | 06:07 19:23-19:45/22<br>20:22 | 04:59 20:01-20:11/10<br>21:23 | 04:24<br>22:05 |
| 17                          | 08:36<br>16:12                | 07:38 16:35-16:49/14<br>17:19 | 06:27<br>18:20                | 06:05 19:23-19:45/22<br>20:24 | 04:57 20:05-20:09/4<br>21:25  | 04:24<br>22:06 |
| 18                          | 08:35<br>16:14                | 07:36 16:33-16:50/17<br>17:21 | 06:24<br>18:22                | 06:02 19:23-19:44/21<br>20:26 | 04:55<br>21:27                | 04:24<br>22:06 |
| 19                          | 08:34<br>16:16                | 07:33 16:33-16:53/20<br>17:24 | 06:22<br>18:24                | 06:00 19:23-19:44/21<br>20:28 | 04:53<br>21:29                | 04:24<br>22:07 |
| 20                          | 08:32<br>16:18                | 07:31 16:32-16:53/21<br>17:26 | 06:19<br>18:26                | 05:57 19:23-19:42/19<br>20:30 | 04:52<br>21:31                | 04:24<br>22:07 |
| 21                          | 08:31<br>16:20                | 07:29 16:32-16:53/21<br>17:28 | 06:16<br>18:28                | 05:55 19:25-19:41/16<br>20:32 | 04:50<br>21:32                | 04:24<br>22:08 |
| 22                          | 08:30<br>16:22                | 07:26 16:32-16:53/21<br>17:30 | 06:14<br>18:30                | 05:52 19:26-19:40/14<br>20:35 | 04:48<br>21:34                | 04:24<br>22:08 |
| 23                          | 08:28<br>16:24                | 07:24 16:32-16:52/20<br>17:32 | 06:11<br>18:32                | 05:50 19:28-19:37/9<br>20:37  | 04:47<br>21:36                | 04:24<br>22:08 |
| 24                          | 08:26<br>16:26                | 07:21 16:33-16:52/19<br>17:35 | 06:08<br>18:34                | 05:47<br>20:39                | 04:45<br>21:38                | 04:24<br>22:08 |
| 25                          | 08:25<br>16:28                | 07:19 16:33-16:50/17<br>17:37 | 06:05<br>18:36                | 05:45<br>20:41                | 04:44<br>21:39                | 04:25<br>22:08 |
| 26                          | 08:23<br>16:30                | 07:16 16:35-16:50/15<br>17:39 | 06:03<br>18:38                | 05:43 20:03-20:11/8<br>20:43  | 04:42<br>21:41                | 04:25<br>22:08 |
| 27                          | 08:22<br>16:33                | 07:14 16:36-16:47/11<br>17:41 | 06:00<br>18:41                | 05:40 20:01-20:13/12<br>20:45 | 04:41<br>21:43                | 04:26<br>22:08 |
| 28                          | 08:20<br>16:35                | 07:11 16:39-16:43/4<br>17:43  | 05:57<br>18:43                | 05:38 19:59-20:15/16<br>20:47 | 04:39<br>21:44                | 04:26<br>22:08 |
| 29                          | 08:18<br>16:37                |                               | 06:55<br>19:45                | 05:35 19:58-20:18/20<br>20:49 | 04:38<br>21:46                | 04:27<br>22:07 |
| 30                          | 08:16<br>16:39                |                               | 06:52<br>19:47                | 05:33 19:56-20:18/22<br>20:51 | 04:37<br>21:47                | 04:28<br>22:07 |
| 31                          | 08:14<br>16:41                |                               | 06:49<br>19:49                |                               | 04:35<br>21:49                |                |
| Potential sun hours         | 236                           | 266                           | 366                           | 426                           | 507                           | 528            |
| Sum of minutes with flicker | 102                           | 293                           | 168                           | 494                           | 350                           | 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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Calculated:

16.07.2025 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: AP2 - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 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<br>22:07                | 05:14 20:06-20:27/21<br>21:26 | 06:15 19:14-19:41/27<br>20:12 | 07:15<br>18:52                | 07:20<br>16:34 | 08:22<br>15:43                |
| 2                           | 04:29<br>22:06                | 05:16 20:05-20:28/23<br>21:24 | 06:17 19:13-19:39/26<br>20:09 | 07:17<br>18:49                | 07:23<br>16:32 | 08:24<br>15:42                |
| 3                           | 04:30<br>22:06                | 05:18 20:05-20:28/23<br>21:21 | 06:19 19:13-19:37/24<br>20:07 | 07:19<br>18:46                | 07:25<br>16:30 | 08:25<br>15:42                |
| 4                           | 04:31<br>22:05                | 05:20 20:05-20:29/24<br>21:19 | 06:21 19:12-19:31/19<br>20:04 | 07:21 17:36-17:40/4<br>18:44  | 07:27<br>16:28 | 08:27 09:58-10:04/6<br>15:41  |
| 5                           | 04:32<br>22:04                | 05:22 20:05-20:29/24<br>21:17 | 06:23 19:11-19:30/19<br>20:01 | 07:23 17:31-17:43/12<br>18:41 | 07:29<br>16:25 | 08:28 09:57-10:06/9<br>15:40  |
| 6                           | 04:33<br>22:04                | 05:24 20:03-20:29/26<br>21:15 | 06:25 19:11-19:28/17<br>19:59 | 07:25 17:29-17:45/16<br>18:38 | 07:31<br>16:23 | 08:30 09:56-10:07/11<br>15:39 |
| 7                           | 04:34<br>22:03                | 05:26 20:03-20:29/26<br>21:13 | 06:27 19:11-19:25/14<br>19:56 | 07:27 17:27-17:46/19<br>18:36 | 07:33<br>16:21 | 08:31 09:56-10:08/12<br>15:39 |
| 8                           | 04:35<br>22:02                | 05:27 20:04-20:29/25<br>21:11 | 06:29 19:11-19:23/12<br>19:53 | 07:29 17:26-17:46/20<br>18:33 | 07:36<br>16:19 | 08:33 09:56-10:10/14<br>15:38 |
| 9                           | 04:36<br>22:01                | 05:29 20:04-20:29/25<br>21:08 | 06:31 19:12-19:20/8<br>19:51  | 07:32 17:25-17:46/21<br>18:30 | 07:38<br>16:17 | 08:34 09:55-10:10/15<br>15:38 |
| 10                          | 04:38<br>22:00                | 05:31 20:04-20:29/25<br>21:06 | 06:33 19:14-19:18/4<br>19:48  | 07:34 17:24-17:46/22<br>18:28 | 07:40<br>16:15 | 08:36 09:56-10:12/16<br>15:37 |
| 11                          | 04:39<br>21:59                | 05:33 20:04-20:27/23<br>21:04 | 06:35<br>19:45                | 07:36 17:25-17:47/22<br>18:25 | 07:42<br>16:13 | 08:37 09:56-10:12/16<br>15:37 |
| 12                          | 04:40<br>21:58                | 05:35 20:04-20:27/23<br>21:02 | 06:37<br>19:43                | 07:38 17:24-17:46/22<br>18:23 | 07:44<br>16:11 | 08:38 09:55-10:12/17<br>15:37 |
| 13                          | 04:42<br>21:57                | 05:37 20:05-20:26/21<br>20:59 | 06:39<br>19:40                | 07:40 17:24-17:46/22<br>18:20 | 07:46<br>16:09 | 08:39 09:55-10:13/18<br>15:36 |
| 14                          | 04:43<br>21:55                | 05:39 20:06-20:25/19<br>20:57 | 06:41<br>19:37                | 07:42 17:10-17:18/8<br>18:18  | 07:48<br>16:08 | 08:40 09:57-10:14/17<br>15:36 |
| 15                          | 04:45<br>21:54                | 05:41 20:07-20:22/15<br>20:55 | 06:43<br>19:35                | 07:44 17:07-17:20/13<br>18:15 | 07:51<br>16:06 | 08:41 09:57-10:15/18<br>15:36 |
| 16                          | 04:46<br>21:53                | 05:43 20:09-20:20/11<br>20:52 | 06:45<br>19:32                | 07:46 17:06-17:22/16<br>18:12 | 07:53<br>16:04 | 08:42 09:57-10:15/18<br>15:36 |
| 17                          | 04:48<br>21:51                | 05:45 20:12-20:18/6<br>20:50  | 06:47<br>19:29                | 07:48 17:05-17:23/18<br>18:10 | 07:55<br>16:02 | 08:43 09:58-10:16/18<br>15:36 |
| 18                          | 04:49<br>21:50                | 05:47<br>20:47                | 06:49<br>19:27                | 07:50 17:04-17:23/19<br>18:07 | 07:57<br>16:01 | 08:44 09:57-10:16/19<br>15:36 |
| 19                          | 04:51<br>21:49                | 05:49<br>20:45                | 06:51<br>19:24                | 07:52 17:03-17:23/20<br>18:05 | 07:59<br>15:59 | 08:45 09:58-10:17/19<br>15:37 |
| 20                          | 04:52<br>21:47                | 05:51 19:33-19:43/10<br>20:42 | 06:53<br>19:21                | 07:55 17:03-17:24/21<br>18:02 | 08:01<br>15:57 | 08:45 09:59-10:17/18<br>15:37 |
| 21                          | 04:54<br>21:46                | 05:53 19:31-19:45/14<br>20:40 | 06:55<br>19:18                | 07:57 17:03-17:23/20<br>18:00 | 08:03<br>15:56 | 08:46 09:58-10:17/19<br>15:37 |
| 22                          | 04:56<br>21:44                | 05:55 19:29-19:46/17<br>20:37 | 06:57<br>19:16                | 07:59 17:02-17:23/21<br>17:58 | 08:05<br>15:54 | 08:47 09:59-10:18/19<br>15:38 |
| 23                          | 04:57<br>21:42                | 05:57 19:28-19:47/19<br>20:35 | 06:59<br>19:13                | 08:01 17:03-17:22/19<br>17:55 | 08:07<br>15:53 | 08:47 09:59-10:18/19<br>15:38 |
| 24                          | 04:59<br>21:41                | 05:59 19:27-19:47/20<br>20:32 | 07:01<br>19:10                | 08:03 17:04-17:20/16<br>17:53 | 08:09<br>15:52 | 08:48 10:01-10:20/19<br>15:39 |
| 25                          | 05:01<br>21:39                | 06:01 19:26-19:48/22<br>20:30 | 07:03<br>19:08                | 07:05 16:04-16:17/13<br>16:50 | 08:11<br>15:50 | 08:48 10:01-10:20/19<br>15:40 |
| 26                          | 05:03<br>21:37                | 06:03 19:25-19:47/22<br>20:27 | 07:05<br>19:05                | 07:07 16:05-16:14/9<br>16:48  | 08:13<br>15:49 | 08:48 10:01-10:20/19<br>15:40 |
| 27                          | 05:05 20:13-20:21/8<br>21:35  | 06:05 19:24-19:47/23<br>20:25 | 07:07<br>19:02                | 07:10 16:08-16:13/5<br>16:46  | 08:15<br>15:48 | 08:48 10:02-10:20/18<br>15:41 |
| 28                          | 05:06 20:11-20:23/12<br>21:33 | 06:07 19:24-19:47/23<br>20:22 | 07:09<br>19:00                | 07:12<br>16:43                | 08:16<br>15:47 | 08:49 10:02-10:21/19<br>15:42 |
| 29                          | 05:08 20:09-20:24/15<br>21:31 | 06:09 19:24-19:46/22<br>20:20 | 07:11<br>18:57                | 07:14<br>16:41                | 08:18<br>15:45 | 08:49 10:03-10:21/18<br>15:43 |
| 30                          | 05:10 20:08-20:26/18<br>21:30 | 06:11 19:18-19:46/28<br>20:17 | 07:13<br>18:54                | 07:16<br>16:39                | 08:20<br>15:44 | 08:49 10:04-10:22/18<br>15:44 |
| 31                          | 05:12 20:07-20:27/20<br>21:28 | 06:13 19:16-19:44/28<br>20:14 |                               | 07:18<br>16:36                |                | 08:48 10:04-10:21/17<br>15:45 |
| Potential sun hours         | 529                           | 469                           | 384                           | 324                           | 248            | 217                           |
| Sum of minutes with flicker | 73                            | 608                           | 170                           | 467                           | 0              | 465                           |

Table 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: AP6.1 - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 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 |  |
|-----------------------------|---------|----------------|----------|-------|----------------|-------|----------------|-------|----------------|-------|------|--|
| 1                           | 08:48   | 10:21-10:48/27 | 08:12    | 07:09 | 17:16-17:17/1  | 06:47 |                | 05:31 |                | 04:34 |      |  |
|                             | 15:47   |                | 16:43    | 17:46 |                | 19:51 |                | 20:53 |                | 21:50 |      |  |
| 2                           | 08:48   | 10:22-10:48/26 | 08:11    | 07:06 | 17:13-17:19/6  | 06:44 |                | 05:28 | 20:19-20:23/4  | 04:33 |      |  |
|                             | 15:48   |                | 16:46    | 17:48 |                | 19:53 |                | 20:55 |                | 21:52 |      |  |
| 3                           | 08:48   | 10:24-10:28/4  | 08:09    | 07:04 | 17:11-17:20/9  | 06:41 |                | 05:26 | 20:17-20:25/8  | 04:32 |      |  |
|                             | 15:49   | 10:29-10:49/20 | 16:48    | 17:50 |                | 19:55 |                | 20:57 |                | 21:53 |      |  |
| 4                           | 08:47   | 10:30-10:48/18 | 08:07    | 07:01 | 17:10-17:23/13 | 06:39 |                | 05:24 | 20:16-20:27/11 | 04:31 |      |  |
|                             | 15:50   |                | 16:50    | 17:52 |                | 19:57 |                | 20:59 |                | 21:54 |      |  |
| 5                           | 08:47   | 10:30-10:48/18 | 08:05    | 06:58 | 17:09-17:25/16 | 06:36 |                | 05:22 | 20:15-20:29/14 | 04:30 |      |  |
|                             | 15:52   |                | 16:52    | 17:54 |                | 19:59 |                | 21:01 |                | 21:55 |      |  |
| 6                           | 08:46   | 10:32-10:48/16 | 08:03    | 06:56 | 17:09-17:28/19 | 06:34 |                | 05:19 | 20:14-20:30/16 | 04:29 |      |  |
|                             | 15:53   |                | 16:55    | 17:56 |                | 20:01 |                | 21:03 |                | 21:57 |      |  |
| 7                           | 08:46   | 10:33-10:48/15 | 08:00    | 06:53 | 17:08-17:27/19 | 06:31 |                | 05:17 | 20:14-20:32/18 | 04:28 |      |  |
|                             | 15:55   |                | 16:57    | 17:59 |                | 20:03 |                | 21:05 |                | 21:58 |      |  |
| 8                           | 08:45   | 10:34-10:47/13 | 07:58    | 06:51 | 17:08-17:26/18 | 06:28 |                | 05:15 | 20:13-20:33/20 | 04:28 |      |  |
|                             | 15:56   |                | 16:59    | 18:01 |                | 20:05 |                | 21:07 |                | 21:59 |      |  |
| 9                           | 08:44   | 10:36-10:47/11 | 07:56    | 06:48 | 17:08-17:25/17 | 06:26 |                | 05:13 | 20:13-20:33/20 | 04:27 |      |  |
|                             | 15:58   |                | 17:01    | 18:03 |                | 20:08 |                | 21:09 |                | 22:00 |      |  |
| 10                          | 08:44   | 10:38-10:45/7  | 07:54    | 06:45 | 17:09-17:25/16 | 06:23 |                | 05:11 | 20:13-20:33/20 | 04:26 |      |  |
|                             | 15:59   |                | 17:04    | 18:05 | 17:33-17:37/4  | 20:10 |                | 21:11 |                | 22:01 |      |  |
| 11                          | 08:43   |                | 07:52    | 06:43 | 17:10-17:23/13 | 06:20 |                | 05:09 | 20:13-20:33/20 | 04:26 |      |  |
|                             | 16:01   |                | 17:06    | 18:07 | 17:30-17:39/9  | 20:12 |                | 21:13 |                | 22:02 |      |  |
| 12                          | 08:42   |                | 07:50    | 06:40 | 17:12-17:20/8  | 06:18 |                | 05:07 | 20:13-20:33/20 | 04:25 |      |  |
|                             | 16:03   |                | 17:08    | 18:09 | 17:28-17:40/12 | 20:14 |                | 21:15 |                | 22:03 |      |  |
| 13                          | 08:41   |                | 07:47    | 06:37 | 17:28-17:43/15 | 06:15 |                | 05:05 | 20:14-20:33/19 | 04:25 |      |  |
|                             | 16:05   |                | 17:10    | 18:11 |                | 20:16 |                | 21:17 |                | 22:03 |      |  |
| 14                          | 08:40   |                | 07:45    | 06:35 | 17:27-17:45/18 | 06:13 |                | 05:03 | 20:14-20:32/18 | 04:24 |      |  |
|                             | 16:06   |                | 17:13    | 18:13 |                | 20:18 |                | 21:19 |                | 22:04 |      |  |
| 15                          | 08:39   |                | 07:43    | 06:32 | 17:26-17:45/19 | 06:10 |                | 05:01 | 20:14-20:31/17 | 04:24 |      |  |
|                             | 16:08   |                | 17:15    | 18:16 |                | 20:20 |                | 21:21 |                | 22:05 |      |  |
| 16                          | 08:38   |                | 07:40    | 06:30 | 17:26-17:46/20 | 06:07 |                | 04:59 | 20:15-20:30/15 | 04:24 |      |  |
|                             | 16:10   |                | 17:17    | 18:18 |                | 20:22 |                | 21:23 |                | 22:05 |      |  |
| 17                          | 08:36   |                | 07:38    | 06:27 | 17:26-17:45/19 | 06:05 | 19:50-19:54/4  | 04:57 | 20:17-20:30/13 | 04:24 |      |  |
|                             | 16:12   |                | 17:19    | 18:20 |                | 20:24 |                | 21:25 |                | 22:06 |      |  |
| 18                          | 08:35   |                | 07:36    | 06:24 | 17:26-17:44/18 | 06:02 | 19:48-19:56/8  | 04:55 | 20:17-20:29/12 | 04:24 |      |  |
|                             | 16:14   |                | 17:21    | 18:22 |                | 20:26 |                | 21:27 |                | 22:07 |      |  |
| 19                          | 08:34   |                | 07:33    | 06:22 | 17:27-17:43/16 | 06:00 | 19:47-19:58/11 | 04:53 | 20:20-20:27/7  | 04:24 |      |  |
|                             | 16:16   |                | 17:24    | 18:24 |                | 20:28 |                | 21:29 |                | 22:07 |      |  |
| 20                          | 08:32   |                | 07:31    | 06:19 | 17:28-17:41/13 | 05:57 | 19:45-19:59/14 | 04:52 |                | 04:24 |      |  |
|                             | 16:18   |                | 17:26    | 18:26 |                | 20:30 |                | 21:31 |                | 22:07 |      |  |
| 21                          | 08:31   |                | 07:29    | 06:16 | 17:29-17:39/10 | 05:55 | 19:45-20:02/17 | 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 | 19:45-20:04/19 | 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 | 19:44-20:03/19 | 04:47 |                | 04:24 |      |  |
|                             | 16:24   |                | 17:32    | 18:32 |                | 20:37 |                | 21:36 |                | 22:08 |      |  |
| 24                          | 08:27   |                | 07:21    | 06:08 |                | 05:47 | 19:45-20:03/18 | 04:45 |                | 04:24 |      |  |
|                             | 16:26   |                | 17:35    | 18:34 |                | 20:39 |                | 21:38 |                | 22:08 |      |  |
| 25                          | 08:25   |                | 07:19    | 06:05 |                | 05:45 | 19:45-20:03/18 | 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 | 19:45-20:01/16 | 04:42 |                | 04:25 |      |  |
|                             | 16:30   |                | 17:39    | 18:38 |                | 20:43 |                | 21:41 |                | 22:08 |      |  |
| 27                          | 08:22   |                | 07:14    | 06:00 |                | 05:40 | 19:46-20:00/14 | 04:41 |                | 04:26 |      |  |
|                             | 16:33   |                | 17:41    | 18:41 |                | 20:45 |                | 21:43 |                | 22:08 |      |  |
| 28                          | 08:20   |                | 07:11    | 05:57 |                | 05:38 | 19:47-19:59/12 | 04:39 |                | 04:26 |      |  |
|                             | 16:35   |                | 17:43    | 18:43 |                | 20:47 |                | 21:44 |                | 22:08 |      |  |
| 29                          | 08:18   |                |          | 06:55 |                | 05:35 | 19:50-19:57/7  | 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 | 175     |                | 0        | 328   |                | 177   |                | 272   |                | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: AP6.1 - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 m) (31)  
 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<br>22:07                | 05:14 20:23-20:43/20<br>21:26 | 06:15<br>20:12                | 07:15 17:53-17:59/6<br>18:52 18:08-18:21/13  | 07:20<br>16:34 | 08:22<br>15:43                              |
| 2                           | 04:29<br>22:06                | 05:16 20:23-20:43/20<br>21:24 | 06:17<br>20:09                | 07:17 17:50-18:01/11<br>18:49 18:08-18:19/11 | 07:23<br>16:32 | 08:24 10:21-10:27/6<br>15:42                |
| 3                           | 04:30<br>22:06                | 05:18 20:23-20:44/21<br>21:21 | 06:19<br>20:07                | 07:19 17:48-18:02/14<br>18:46 18:10-18:16/6  | 07:25<br>16:30 | 08:25 10:19-10:30/11<br>15:42               |
| 4                           | 04:31<br>22:05                | 05:20 20:23-20:44/21<br>21:19 | 06:21<br>20:04                | 07:21 17:47-18:03/16<br>18:44                | 07:27<br>16:28 | 08:27 10:19-10:31/12<br>15:41               |
| 5                           | 04:32<br>22:04                | 05:22 20:24-20:44/20<br>21:17 | 06:23<br>20:01                | 07:23 17:45-18:03/18<br>18:41                | 07:29<br>16:25 | 08:28 10:18-10:33/15<br>15:40               |
| 6                           | 04:33<br>22:04                | 05:24 20:23-20:41/18<br>21:15 | 06:25<br>19:59                | 07:25 17:45-18:03/18<br>18:38                | 07:31<br>16:23 | 08:30 10:17-10:33/16<br>15:39               |
| 7                           | 04:34<br>22:03                | 05:26 20:24-20:39/15<br>21:13 | 06:27<br>19:56                | 07:27 17:44-18:03/19<br>18:36                | 07:33<br>16:21 | 08:31 10:17-10:35/18<br>15:39               |
| 8                           | 04:35<br>22:02                | 05:27 20:24-20:37/13<br>21:11 | 06:29<br>19:53                | 07:30 17:44-18:02/18<br>18:33                | 07:36<br>16:19 | 08:33 10:18-10:36/18<br>15:38               |
| 9                           | 04:36<br>22:01                | 05:29 20:25-20:35/10<br>21:08 | 06:31<br>19:51                | 07:32 17:44-17:59/15<br>18:31                | 07:38<br>16:17 | 08:34 10:13-10:16/3<br>15:38 10:17-10:37/20 |
| 10                          | 04:38<br>22:00                | 05:31 20:27-20:34/7<br>21:06  | 06:33<br>19:48                | 07:34 17:44-17:56/12<br>18:28                | 07:40<br>16:15 | 08:36 10:12-10:38/26<br>15:37               |
| 11                          | 04:39<br>21:59                | 05:33 20:28-20:31/3<br>21:04  | 06:35<br>19:45                | 07:36 17:46-17:54/8<br>18:25                 | 07:42<br>16:13 | 08:37 10:11-10:38/27<br>15:37               |
| 12                          | 04:40<br>21:58                | 05:35<br>21:02                | 06:37<br>19:43                | 07:38 17:48-17:51/3<br>18:23                 | 07:44<br>16:11 | 08:38 10:11-10:39/28<br>15:37               |
| 13                          | 04:42<br>21:57                | 05:37<br>20:59                | 06:39<br>19:40                | 07:40<br>18:20                               | 07:46<br>16:09 | 08:39 10:10-10:39/29<br>15:36               |
| 14                          | 04:43<br>21:55                | 05:39 19:56-20:05/9<br>20:57  | 06:41<br>19:37                | 07:42<br>18:18                               | 07:48<br>16:08 | 08:40 10:11-10:41/30<br>15:36               |
| 15                          | 04:45<br>21:54                | 05:41 19:55-20:07/12<br>20:55 | 06:43<br>19:35                | 07:44<br>18:15                               | 07:51<br>16:06 | 08:41 10:11-10:41/30<br>15:36               |
| 16                          | 04:46<br>21:53                | 05:43 19:53-20:08/15<br>20:52 | 06:45<br>19:32                | 07:46<br>18:13                               | 07:53<br>16:04 | 08:42 10:11-10:42/31<br>15:36               |
| 17                          | 04:48<br>21:52                | 05:45 19:52-20:09/17<br>20:50 | 06:47<br>19:29                | 07:48<br>18:10                               | 07:55<br>16:02 | 08:43 10:12-10:42/30<br>15:36               |
| 18                          | 04:49<br>21:50                | 05:47 19:51-20:08/17<br>20:47 | 06:49<br>19:27                | 07:50<br>18:07                               | 07:57<br>16:01 | 08:44 10:11-10:42/31<br>15:36               |
| 19                          | 04:51<br>21:49                | 05:49 19:50-20:09/19<br>20:45 | 06:51<br>19:24                | 07:52<br>18:05                               | 07:59<br>15:59 | 08:45 10:12-10:43/31<br>15:37               |
| 20                          | 04:52<br>21:47                | 05:51 19:50-20:09/19<br>20:42 | 06:53<br>19:21                | 07:55<br>18:02                               | 08:01<br>15:57 | 08:45 10:12-10:44/32<br>15:37               |
| 21                          | 04:54<br>21:46                | 05:53 19:50-20:08/18<br>20:40 | 06:55<br>19:18                | 07:57<br>18:00                               | 08:03<br>15:56 | 08:46 10:12-10:44/32<br>15:37               |
| 22                          | 04:56<br>21:44                | 05:55 19:50-20:06/16<br>20:37 | 06:57 18:15-18:22/7<br>19:16  | 07:59<br>17:58                               | 08:05<br>15:54 | 08:47 10:13-10:45/32<br>15:38               |
| 23                          | 04:57<br>21:42                | 05:57 19:50-20:04/14<br>20:35 | 06:59 18:12-18:24/12<br>19:13 | 08:01<br>17:55                               | 08:07<br>15:53 | 08:47 10:13-10:45/32<br>15:38               |
| 24                          | 04:59 20:31-20:35/4<br>21:41  | 05:59 19:51-20:02/11<br>20:32 | 07:01 18:10-18:26/16<br>19:10 | 08:03<br>17:53                               | 08:09<br>15:52 | 08:48 10:15-10:46/31<br>15:39               |
| 25                          | 05:01 20:29-20:39/10<br>21:39 | 06:01 19:52-19:59/7<br>20:30  | 07:03 18:09-18:26/17<br>19:08 | 07:05<br>16:50                               | 08:11<br>15:50 | 08:48 10:15-10:46/31<br>15:40               |
| 26                          | 05:03 20:27-20:39/12<br>21:37 | 06:03 19:52-19:56/4<br>20:27  | 07:05 18:08-18:26/18<br>19:05 | 07:07<br>16:48                               | 08:13<br>15:49 | 08:48 10:15-10:46/31<br>15:40               |
| 27                          | 05:05 20:26-20:41/15<br>21:35 | 06:05<br>20:25                | 07:07 18:07-18:26/19<br>19:02 | 07:10<br>16:46                               | 08:15<br>15:48 | 08:48 10:16-10:47/31<br>15:41               |
| 28                          | 05:06 20:26-20:42/16<br>21:33 | 06:07<br>20:22                | 07:09 18:07-18:26/19<br>19:00 | 07:12<br>16:43                               | 08:17<br>15:47 | 08:49 10:17-10:47/30<br>15:42               |
| 29                          | 05:08 20:24-20:42/18<br>21:31 | 06:09<br>20:20                | 07:11 18:06-18:26/20<br>18:57 | 07:14<br>16:41                               | 08:18<br>15:45 | 08:49 10:18-10:47/29<br>15:43               |
| 30                          | 05:10 20:24-20:43/19<br>21:30 | 06:11<br>20:17                | 07:13 18:06-18:23/17<br>18:54 | 07:16<br>16:39                               | 08:20<br>15:44 | 08:49 10:19-10:48/29<br>15:44               |
| 31                          | 05:12 20:24-20:43/19<br>21:28 | 06:13<br>20:14                |                               | 07:18<br>16:36                               |                | 08:49 10:19-10:48/29<br>15:45               |
| Potential sun hours         | 529                           | 469                           | 384                           | 324  | 248            | 217   |
| Sum of minutes with flicker | 113                           | 346                           | 145                           | 188  | 0              | 781   |

Table 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: DD1 - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 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   | 13:34-14:13/39 | 08:13    | 13:57-14:12/15 | 07:09 | 16:10-16:50/40 | 06:47 | 05:31 | 04:35 |
|                             | 15:47   |                | 16:44    |                | 17:46 |                | 19:51 | 20:53 | 21:50 |
| 2                           | 08:48   | 13:35-14:14/39 | 08:11    | 14:03-14:07/4  | 07:06 | 16:08-16:50/42 | 06:45 | 05:29 | 04:34 |
|                             | 15:48   |                | 16:46    |                | 17:48 |                | 19:53 | 20:55 | 21:52 |
| 3                           | 08:48   | 13:35-14:14/39 | 08:09    |                | 07:04 | 16:08-16:51/43 | 06:42 | 05:27 | 04:33 |
|                             | 15:50   |                | 16:48    |                | 17:50 | 17:20-17:22/2  | 19:55 | 20:57 | 21:53 |
| 4                           | 08:47   | 13:36-14:15/39 | 08:07    |                | 07:01 | 16:07-16:51/44 | 06:39 | 05:24 | 04:32 |
|                             | 15:51   |                | 16:51    |                | 17:53 | 17:17-17:24/7  | 19:57 | 20:59 | 21:54 |
| 5                           | 08:47   | 13:36-14:16/40 | 08:05    |                | 06:59 | 16:06-16:51/45 | 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   | 13:36-14:16/40 | 08:03    |                | 06:56 | 16:06-16:52/46 | 06:34 | 05:20 | 04:30 |
|                             | 15:54   |                | 16:55    |                | 17:57 | 17:14-17:28/14 | 20:02 | 21:04 | 21:57 |
| 7                           | 08:46   | 13:36-14:16/40 | 08:01    |                | 06:54 | 16:06-16:52/46 | 06:31 | 05:18 | 04:29 |
|                             | 15:55   |                | 16:57    |                | 17:59 | 17:12-17:30/18 | 20:04 | 21:06 | 21:58 |
| 8                           | 08:45   | 13:36-14:17/41 | 07:58    |                | 06:51 | 16:06-16:52/46 | 06:29 | 05:16 | 04:28 |
|                             | 15:57   |                | 17:00    |                | 18:01 | 17:11-17:32/21 | 20:06 | 21:08 | 21:59 |
| 9                           | 08:44   | 13:37-14:17/40 | 07:56    | 16:25-16:29/4  | 06:48 | 16:06-16:52/46 | 06:26 | 05:14 | 04:28 |
|                             | 15:59   |                | 17:02    |                | 18:03 | 17:12-17:35/23 | 20:08 | 21:10 | 22:00 |
| 10                          | 08:44   | 13:37-14:18/41 | 07:54    | 16:24-16:32/8  | 06:46 | 16:05-16:51/46 | 06:23 | 05:11 | 04:27 |
|                             | 16:00   |                | 17:04    |                | 18:05 | 17:11-17:37/26 | 20:10 | 21:12 | 22:01 |
| 11                          | 08:43   | 13:38-14:19/41 | 07:52    | 16:22-16:34/12 | 06:43 | 16:05-16:50/45 | 06:21 | 05:09 | 04:27 |
|                             | 16:02   |                | 17:06    |                | 18:07 | 17:11-17:39/28 | 20:12 | 21:14 | 22:02 |
| 12                          | 08:42   | 13:38-14:19/41 | 07:50    | 16:22-16:37/15 | 06:40 | 16:06-16:50/44 | 06:18 | 05:07 | 04:26 |
|                             | 16:04   |                | 17:09    |                | 18:10 | 17:12-17:42/30 | 20:14 | 21:16 | 22:03 |
| 13                          | 08:41   | 13:39-14:20/41 | 07:48    | 16:22-16:39/17 | 06:38 | 16:06-16:49/43 | 06:16 | 05:05 | 04:26 |
|                             | 16:05   |                | 17:11    |                | 18:12 | 17:12-17:43/31 | 20:16 | 21:17 | 22:03 |
| 14                          | 08:40   | 13:39-14:19/40 | 07:45    | 16:21-16:40/19 | 06:35 | 16:06-16:48/42 | 06:13 | 05:03 | 04:25 |
|                             | 16:07   |                | 17:13    |                | 18:14 | 17:13-17:44/31 | 20:18 | 21:19 | 22:04 |
| 15                          | 08:39   | 13:39-14:20/41 | 07:43    | 16:21-16:40/19 | 06:33 | 16:07-16:48/41 | 06:11 | 05:01 | 04:25 |
|                             | 16:09   |                | 17:15    |                | 18:16 | 17:16-17:44/28 | 20:20 | 21:21 | 22:05 |
| 16                          | 08:38   | 13:40-14:21/41 | 07:41    | 16:21-16:40/19 | 06:30 | 16:08-16:46/38 | 06:08 | 05:00 | 04:25 |
|                             | 16:11   |                | 17:17    |                | 18:18 | 17:15-17:44/29 | 20:22 | 21:23 | 22:05 |
| 17                          | 08:36   | 13:40-14:21/41 | 07:38    | 16:22-16:40/18 | 06:27 | 16:08-16:45/37 | 06:05 | 04:58 | 04:25 |
|                             | 16:13   |                | 17:20    |                | 18:20 | 17:15-17:43/28 | 20:24 | 21:25 | 22:06 |
| 18                          | 08:35   | 13:41-14:21/40 | 07:36    | 16:22-16:38/16 | 06:25 | 16:10-16:44/34 | 06:03 | 04:56 | 04:24 |
|                             | 16:15   |                | 17:22    |                | 18:22 | 17:16-17:43/27 | 20:26 | 21:27 | 22:06 |
| 19                          | 08:34   | 13:41-14:21/40 | 07:34    | 16:23-16:38/15 | 06:22 | 16:11-16:42/31 | 06:00 | 04:54 | 04:24 |
|                             | 16:17   |                | 17:24    |                | 18:24 | 17:16-17:41/25 | 20:28 | 21:29 | 22:07 |
| 20                          | 08:33   | 13:42-14:21/39 | 07:31    | 16:24-16:36/12 | 06:19 | 16:13-16:39/26 | 05:58 | 04:52 | 04:24 |
|                             | 16:19   |                | 17:26    |                | 18:26 | 17:16-17:40/24 | 20:31 | 21:31 | 22:07 |
| 21                          | 08:31   | 13:43-14:21/38 | 07:29    | 16:28-16:33/5  | 06:17 | 16:16-16:37/21 | 05:55 | 04:51 | 04:25 |
|                             | 16:21   |                | 17:29    |                | 18:28 | 17:18-17:37/19 | 20:33 | 21:32 | 22:07 |
| 22                          | 08:30   | 13:43-14:21/38 | 07:26    | 16:23-16:38/15 | 06:14 | 16:19-16:33/14 | 05:53 | 04:49 | 04:25 |
|                             | 16:23   |                | 17:31    |                | 18:31 | 17:19-17:34/15 | 20:35 | 21:34 | 22:08 |
| 23                          | 08:28   | 13:44-14:21/37 | 07:24    | 16:20-16:42/22 | 06:11 | 17:22-17:29/7  | 05:50 | 04:47 | 04:25 |
|                             | 16:25   |                | 17:33    |                | 18:33 |                | 20:37 | 21:36 | 22:08 |
| 24                          | 08:27   | 13:45-14:20/35 | 07:21    | 16:17-16:44/27 | 06:09 |                | 05:48 | 04:46 | 04:25 |
|                             | 16:27   |                | 17:35    |                | 18:35 |                | 20:39 | 21:38 | 22:08 |
| 25                          | 08:25   | 13:45-14:20/35 | 07:19    | 16:16-16:46/30 | 06:06 |                | 05:46 | 04:44 | 04:26 |
|                             | 16:29   |                | 17:37    |                | 18:37 |                | 20:41 | 21:39 | 22:08 |
| 26                          | 08:23   | 13:46-14:19/33 | 07:16    | 16:14-16:47/33 | 06:03 |                | 05:43 | 04:43 | 04:26 |
|                             | 16:31   |                | 17:40    |                | 18:39 |                | 20:43 | 21:41 | 22:08 |
| 27                          | 08:22   | 13:47-14:19/32 | 07:14    | 16:12-16:48/36 | 06:01 |                | 05:41 | 04:41 | 04:27 |
|                             | 16:33   |                | 17:42    |                | 18:41 |                | 20:45 | 21:43 | 22:08 |
| 28                          | 08:20   | 13:49-14:18/29 | 07:11    | 16:11-16:50/39 | 05:58 |                | 05:38 | 04:40 | 04:27 |
|                             | 16:35   |                | 17:44    |                | 18:43 |                | 20:47 | 21:44 | 22:07 |
| 29                          | 08:18   | 13:50-14:17/27 |          |                | 06:55 |                | 05:36 | 04:39 | 04:28 |
|                             | 16:37   |                |          |                | 19:45 |                | 20:49 | 21:46 | 22:07 |
| 30                          | 08:16   | 13:52-14:16/24 |          |                | 06:53 |                | 05:34 | 04:37 | 04:28 |
|                             | 16:40   |                |          |                | 19:47 |                | 20:51 | 21:47 | 22:07 |
| 31                          | 08:14   | 13:54-14:14/20 |          |                | 06:50 |                |       | 04:36 |       |
|                             | 16:42   |                |          |                | 19:49 |                |       | 21:49 |       |
| Potential sun hours         | 236     |                | 266      |                | 366   |                | 426   | 507   | 528   |
| Sum of minutes with flicker | 1151    |                | 400      |                | 1304  |                | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: DD1 - VESTAS V162-6.2 6200 162.0 IO! hub: 166,0 m (TOT: 247,0 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<br>22:06 | 05:15<br>21:26 | 06:16<br>20:12                               | 07:16 16:45-17:29/44<br>18:52 17:51-18:22/31 | 07:21 15:53-16:01/8<br>16:35  | 08:22 13:20-14:01/41<br>15:44 |
| 2                           | 04:30<br>22:06 | 05:16<br>21:24 | 06:18<br>20:09                               | 07:18 16:44-17:29/45<br>18:49 17:50-18:19/29 | 07:23 15:55-15:58/3<br>16:33  | 08:24 13:20-14:01/41<br>15:43 |
| 3                           | 04:31<br>22:05 | 05:18<br>21:22 | 06:20<br>20:07                               | 07:20 16:43-17:29/46<br>18:47 17:49-18:16/27 | 07:25<br>16:30                | 08:25 13:21-14:01/40<br>15:42 |
| 4                           | 04:32<br>22:05 | 05:20<br>21:19 | 06:22<br>20:04                               | 07:22 16:43-17:29/46<br>18:44 17:49-18:13/24 | 07:27<br>16:28                | 08:27 13:22-14:02/40<br>15:41 |
| 5                           | 04:33<br>22:04 | 05:22<br>21:17 | 06:24<br>20:02                               | 07:24 16:42-17:28/46<br>18:41 17:48-18:10/22 | 07:29<br>16:26                | 08:28 13:21-14:02/41<br>15:41 |
| 6                           | 04:34<br>22:03 | 05:24<br>21:15 | 06:26<br>19:59                               | 07:26 16:42-17:28/46<br>18:39 17:48-18:08/20 | 07:31<br>16:24                | 08:30 13:22-14:02/40<br>15:40 |
| 7                           | 04:35<br>22:03 | 05:26<br>21:13 | 06:28<br>19:56                               | 07:28 16:41-17:27/46<br>18:36 17:48-18:05/17 | 07:34<br>16:22                | 08:31 13:23-14:03/40<br>15:39 |
| 8                           | 04:36<br>22:02 | 05:28<br>21:11 | 06:30<br>19:54                               | 07:30 16:42-17:28/46<br>18:34 17:49-18:02/13 | 07:36<br>16:20                | 08:33 13:23-14:03/40<br>15:39 |
| 9                           | 04:37<br>22:01 | 05:30<br>21:09 | 06:32<br>19:51                               | 07:32 16:42-17:27/45<br>18:31 17:51-18:00/9  | 07:38 13:33-13:39/6<br>16:18  | 08:34 13:24-14:03/39<br>15:38 |
| 10                          | 04:39<br>22:00 | 05:32<br>21:06 | 06:34<br>19:48                               | 07:34 16:42-17:26/44<br>18:28 17:53-17:57/4  | 07:40 13:28-13:43/15<br>16:16 | 08:36 13:24-14:03/39<br>15:38 |
| 11                          | 04:40<br>21:59 | 05:34<br>21:04 | 06:36<br>19:46                               | 07:36 16:42-17:25/43<br>18:26                | 07:42 13:26-13:46/20<br>16:14 | 08:37 13:25-14:04/39<br>15:38 |
| 12                          | 04:41<br>21:58 | 05:36<br>21:02 | 06:38<br>19:43                               | 07:38 16:43-17:24/41<br>18:23                | 07:44 13:24-13:48/24<br>16:12 | 08:38 13:26-14:04/38<br>15:37 |
| 13                          | 04:43<br>21:57 | 05:38<br>20:59 | 06:40<br>19:40                               | 07:40 16:43-17:23/40<br>18:21                | 07:46 13:22-13:49/27<br>16:10 | 08:39 13:26-14:04/38<br>15:37 |
| 14                          | 04:44<br>21:55 | 05:40<br>20:57 | 06:42<br>19:38                               | 07:42 16:44-17:21/37<br>18:18                | 07:49 13:22-13:51/29<br>16:08 | 08:40 13:26-14:04/38<br>15:37 |
| 15                          | 04:45<br>21:54 | 05:42<br>20:55 | 06:44<br>19:35                               | 07:44 16:45-17:21/36<br>18:16                | 07:51 13:20-13:52/32<br>16:06 | 08:41 13:27-14:05/38<br>15:37 |
| 16                          | 04:47<br>21:53 | 05:44<br>20:52 | 06:46<br>19:32                               | 07:46 16:46-17:19/33<br>18:13                | 07:53 13:19-13:52/33<br>16:05 | 08:42 13:27-14:05/38<br>15:37 |
| 17                          | 04:48<br>21:51 | 05:46<br>20:50 | 06:48<br>19:30                               | 07:48 16:48-17:17/29<br>18:10                | 07:55 13:19-13:54/35<br>16:03 | 08:43 13:28-14:06/38<br>15:37 |
| 18                          | 04:50<br>21:50 | 05:48<br>20:48 | 06:50<br>19:27                               | 07:51 16:49-17:14/25<br>18:08                | 07:57 13:19-13:54/35<br>16:01 | 08:44 13:29-14:06/37<br>15:37 |
| 19                          | 04:52<br>21:49 | 05:50<br>20:45 | 06:52<br>19:24                               | 07:53 16:52-17:12/20<br>18:05                | 07:59 13:18-13:55/37<br>16:00 | 08:45 13:29-14:07/38<br>15:37 |
| 20                          | 04:53<br>21:47 | 05:52<br>20:43 | 06:54 18:10-18:14/4<br>19:21                 | 07:55 16:56-17:08/12<br>18:03                | 08:01 13:18-13:56/38<br>15:58 | 08:45 13:29-14:07/38<br>15:38 |
| 21                          | 04:55<br>21:46 | 05:54<br>20:40 | 06:56 17:07-17:17/10<br>19:19 18:05-18:18/13 | 07:57 16:57-17:05/8<br>18:01                 | 08:03 13:18-13:57/39<br>15:57 | 08:46 13:30-14:08/38<br>15:38 |
| 22                          | 04:57<br>21:44 | 05:56<br>20:38 | 06:58 17:01-17:21/20<br>19:16 18:03-18:22/19 | 07:59 16:54-17:07/13<br>17:58                | 08:05 13:18-13:57/39<br>15:55 | 08:47 13:31-14:08/37<br>15:39 |
| 23                          | 04:58<br>21:42 | 05:58<br>20:35 | 07:00 16:58-17:23/25<br>19:13 18:01-18:24/23 | 08:01 16:53-17:08/15<br>17:56                | 08:07 13:19-13:58/39<br>15:54 | 08:47 13:31-14:09/38<br>15:39 |
| 24                          | 05:00<br>21:41 | 06:00<br>20:33 | 07:02 16:56-17:25/29<br>19:11 18:00-18:25/25 | 08:03 16:52-17:09/17<br>17:53                | 08:09 13:18-13:58/40<br>15:52 | 08:48 13:31-14:09/38<br>15:40 |
| 25                          | 05:02<br>21:39 | 06:02<br>20:30 | 07:04 16:53-17:26/33<br>19:08 17:59-18:25/26 | 07:05 15:51-16:09/18<br>16:51                | 08:11 13:18-13:59/41<br>15:51 | 08:48 13:32-14:09/37<br>15:40 |
| 26                          | 05:03<br>21:37 | 06:04<br>20:28 | 07:06 16:51-17:27/36<br>19:05 17:58-18:26/28 | 07:08 15:51-16:10/19<br>16:48                | 08:13 13:18-13:59/41<br>15:50 | 08:48 13:33-14:10/37<br>15:41 |
| 27                          | 05:05<br>21:35 | 06:06<br>20:25 | 07:08 16:50-17:28/38<br>19:03 17:57-18:26/29 | 07:10 15:51-16:10/19<br>16:46                | 08:15 13:18-13:59/41<br>15:48 | 08:48 13:33-14:11/38<br>15:42 |
| 28                          | 05:07<br>21:33 | 06:08<br>20:22 | 07:10 16:48-17:28/40<br>19:00 17:57-18:25/28 | 07:12 15:50-16:09/19<br>16:44                | 08:17 13:19-14:00/41<br>15:47 | 08:49 13:34-14:12/38<br>15:43 |
| 29                          | 05:09<br>21:32 | 06:10<br>20:20 | 07:12 16:47-17:29/42<br>18:57 17:55-18:25/30 | 07:14 15:51-16:08/17<br>16:41                | 08:18 13:19-14:00/41<br>15:46 | 08:49 13:33-14:11/38<br>15:44 |
| 30                          | 05:11<br>21:30 | 06:12<br>20:17 | 07:14 16:46-17:29/43<br>18:55 17:53-18:24/31 | 07:16 15:51-16:06/15<br>16:39                | 08:20 13:19-14:00/41<br>15:45 | 08:49 13:34-14:12/38<br>15:45 |
| 31                          | 05:13<br>21:28 | 06:14<br>20:15 |  | 07:18 15:52-16:03/11<br>16:37                |                               | 08:48 13:34-14:13/39<br>15:46 |
| Potential sun hours         | 528            | 469            | 384  | 324  | 248                           | 217                           |
| Sum of minutes with flicker | 0              | 0              | 572  | 1137   | 745                           | 1197                          |

Table 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: DD3 - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 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 12:50-13:35/45<br>15:47 11:21-11:52/31                | 08:13 12:52-13:54/62<br>16:44 15:20-15:32/12 | 07:09 16:06-16:56/50<br>17:46 | 06:47 19:51 | 05:31 20:53 | 04:35 21:50 |
| 2                           | 08:48 12:51-13:36/45<br>15:48 11:22-11:52/30                | 08:11 12:53-13:54/61<br>16:46 15:23-15:30/7  | 07:06 16:07-16:55/48<br>17:48 | 06:45 19:53 | 05:29 20:55 | 04:34 21:51 |
| 3                           | 08:48 12:50-13:36/46<br>15:50 11:22-11:52/30                | 08:09 12:53-13:54/61<br>16:48                | 07:04 16:08-16:55/47<br>17:50 | 06:42 19:55 | 05:27 20:57 | 04:33 21:53 |
| 4                           | 08:47 12:51-13:38/47<br>15:51 11:24-11:53/29                | 08:07 12:54-13:54/60<br>16:51                | 07:01 16:09-16:54/45<br>17:53 | 06:39 19:57 | 05:24 20:59 | 04:32 21:54 |
| 5                           | 08:47 12:51-13:38/47<br>15:52 11:24-11:53/29                | 08:05 12:54-13:53/59<br>16:53                | 06:59 16:10-16:52/42<br>17:55 | 06:37 19:59 | 05:22 21:01 | 04:31 21:55 |
| 6                           | 08:46 12:50-13:39/49<br>15:54 11:25-11:52/27                | 08:03 12:54-13:53/59<br>16:55                | 06:56 16:32-16:51/19<br>17:57 | 06:34 20:02 | 05:20 21:03 | 04:30 21:57 |
| 7                           | 08:46 12:50-13:40/50<br>15:55 11:25-11:52/27                | 08:01 12:55-13:53/58<br>16:57                | 06:53 16:33-16:49/16<br>17:59 | 06:31 20:04 | 05:18 21:06 | 04:29 21:58 |
| 8                           | 08:45 12:50-13:40/50<br>15:57 11:26-11:52/26                | 07:58 12:55-13:52/57<br>17:00                | 06:51 16:36-16:45/9<br>18:01  | 06:29 20:06 | 05:16 21:08 | 04:28 21:59 |
| 9                           | 08:44 12:50-13:41/51<br>15:58 11:27-11:52/25                | 07:56 12:57-13:51/54<br>17:02                | 06:48 18:03                   | 06:26 20:08 | 05:14 21:10 | 04:28 22:00 |
| 10                          | 08:44 12:50-13:42/52 15:16-15:19/3<br>16:00 11:29-11:51/22  | 07:54 12:58-13:51/53<br>17:04                | 06:46 18:05                   | 06:23 20:10 | 05:11 21:12 | 04:27 22:01 |
| 11                          | 08:43 12:50-13:43/53 15:15-15:21/6<br>16:02 11:30-11:51/21  | 07:52 12:58-13:50/52<br>17:06                | 06:43 18:07                   | 06:21 20:12 | 05:09 21:13 | 04:26 22:02 |
| 12                          | 08:42 12:51-13:44/53 15:14-15:23/9<br>16:04 11:32-11:51/19  | 07:50 13:00-13:49/49<br>17:09                | 06:40 18:10                   | 06:18 20:14 | 05:07 21:15 | 04:26 22:03 |
| 13                          | 08:41 12:51-13:45/54 15:14-15:26/12<br>16:05 11:34-11:50/16 | 07:47 13:01-13:48/47<br>17:11                | 06:38 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<br>16:07 11:35-11:48/13 | 07:45 13:02-13:46/44<br>17:13                | 06:35 18:14                   | 06:13 20:18 | 05:03 21:19 | 04:25 22:04 |
| 15                          | 08:39 12:51-13:46/55 15:13-15:29/16<br>16:09 11:39-11:46/7  | 07:43 13:04-13:45/41<br>17:15                | 06:32 18:16                   | 06:11 20:20 | 05:01 21:21 | 04:25 22:05 |
| 16                          | 08:38 12:51-13:48/57<br>16:11 15:12-15:31/19                | 07:41 13:06-13:43/37<br>17:17                | 06:30 18:18                   | 06:08 20:22 | 05:00 21:23 | 04:25 22:05 |
| 17                          | 08:36 12:50-13:48/58<br>16:13 15:12-15:32/20                | 07:38 13:09-13:41/32<br>17:20                | 06:27 18:20                   | 06:05 20:24 | 04:58 21:25 | 04:24 22:06 |
| 18                          | 08:35 12:50-13:48/58<br>16:15 15:12-15:33/21                | 07:36 13:11-13:38/27<br>17:22                | 06:25 18:22                   | 06:03 20:26 | 04:56 21:27 | 04:24 22:06 |
| 19                          | 08:34 12:51-13:49/58<br>16:17 15:12-15:34/22                | 07:34 13:16-13:34/18<br>17:24                | 06:22 17:50-17:56/6<br>18:24  | 06:00 20:28 | 04:54 21:29 | 04:24 22:07 |
| 20                          | 08:32 12:50-13:49/59<br>16:19 15:12-15:34/22                | 07:31 16:07-16:52/45<br>17:26                | 06:19 17:48-17:58/10<br>18:26 | 05:58 20:31 | 04:52 21:31 | 04:24 22:07 |
| 21                          | 08:31 12:51-13:51/60<br>16:21 15:12-15:34/22                | 07:29 16:07-16:54/47<br>17:29                | 06:17 17:46-18:00/14<br>18:28 | 05:55 20:33 | 04:51 21:32 | 04:25 22:07 |
| 22                          | 08:30 12:51-13:51/60<br>16:23 15:13-15:36/23                | 07:26 16:06-16:55/49<br>17:31                | 06:14 17:45-18:03/18<br>18:30 | 05:53 20:35 | 04:49 21:34 | 04:25 22:08 |
| 23                          | 08:28 12:51-13:51/60<br>16:25 15:13-15:36/23                | 07:24 16:06-16:56/50<br>17:33                | 06:11 17:44-18:04/20<br>18:33 | 05:50 20:37 | 04:47 21:36 | 04:25 22:08 |
| 24                          | 08:27 12:51-13:52/61<br>16:27 15:13-15:36/23                | 07:21 16:05-16:56/51<br>17:35                | 06:09 17:43-18:03/20<br>18:35 | 05:48 20:39 | 04:46 21:38 | 04:25 22:08 |
| 25                          | 08:25 12:51-13:52/61<br>16:29 15:13-15:36/23                | 07:19 16:05-16:56/51<br>17:37                | 06:06 17:44-18:04/20<br>18:37 | 05:46 20:41 | 04:44 21:39 | 04:26 22:08 |
| 26                          | 08:23 12:51-13:52/61<br>16:31 15:13-15:36/23                | 07:16 16:05-16:57/52<br>17:40                | 06:03 17:44-18:03/19<br>18:39 | 05:43 20:43 | 04:43 21:41 | 04:26 22:08 |
| 27                          | 08:22 12:51-13:53/62<br>16:33 15:14-15:36/22                | 07:14 16:05-16:56/51<br>17:42                | 06:01 17:43-18:02/19<br>18:41 | 05:41 20:45 | 04:41 21:43 | 04:27 22:08 |
| 28                          | 08:20 12:51-13:53/62<br>16:35 15:15-15:35/20                | 07:11 16:06-16:57/51<br>17:44                | 05:58 17:45-18:01/16<br>18:43 | 05:38 20:47 | 04:40 21:44 | 04:27 22:07 |
| 29                          | 08:18 12:51-13:53/62<br>16:37 15:16-15:35/19                |  | 06:55 18:45-18:59/14<br>19:45 | 05:36 20:49 | 04:39 21:46 | 04:28 22:07 |
| 30                          | 08:16 12:51-13:53/62<br>16:40 15:17-15:34/17                |  | 06:53 18:47-18:56/9<br>19:47  | 05:34 20:51 | 04:37 21:47 | 04:28 22:07 |
| 31                          | 08:14 12:52-13:53/61<br>16:42 15:18-15:34/16                |  | 06:50 19:49                   |             | 04:36 21:49 |             |
| Potential sun hours         | 236   | 266  | 366                           | 426         | 507         | 528         |
| Sum of minutes with flicker | 2461  | 1686   | 486                           | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: DD3 - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 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<br>22:06 | 05:15<br>21:26 | 06:16<br>20:12                | 07:16<br>18:52                               | 07:20 12:27-13:21/54<br>16:35 15:50-16:01/11                | 08:22 12:32-13:25/53 14:57-15:03/6<br>15:44 11:12-11:33/21 |
| 2                           | 04:30<br>22:06 | 05:16<br>21:24 | 06:18<br>20:09                | 07:18<br>18:49                               | 07:23 12:26-13:21/55<br>16:32 15:50-15:58/8                 | 08:24 12:33-13:25/52 14:59-15:02/3<br>15:43 11:12-11:34/22 |
| 3                           | 04:31<br>22:05 | 05:18<br>21:21 | 06:20<br>20:07                | 07:20<br>18:47                               | 07:25 12:25-13:21/56<br>16:30 15:51-15:55/4                 | 08:25 12:34-13:25/51<br>15:42 11:12-11:36/24               |
| 4                           | 04:32<br>22:05 | 05:20<br>21:19 | 06:22<br>20:04                | 07:22<br>18:44                               | 07:27 12:25-13:23/58<br>16:28                               | 08:27 12:35-13:26/51<br>15:41 11:12-11:37/25               |
| 5                           | 04:33<br>22:04 | 05:22<br>21:17 | 06:24<br>20:02                | 07:24 17:16-17:19/3<br>18:41                 | 07:29 12:24-13:23/59<br>16:26                               | 08:28 12:35-13:25/50<br>15:41 11:11-11:37/26               |
| 6                           | 04:34<br>22:03 | 05:24<br>21:15 | 06:26<br>19:59                | 07:26 17:11-17:24/13<br>18:39                | 07:31 12:24-13:24/60<br>16:24                               | 08:30 12:37-13:25/48<br>15:40 11:11-11:38/27               |
| 7                           | 04:35<br>22:03 | 05:26<br>21:13 | 06:28<br>19:56                | 07:28 16:50-17:03/13<br>18:36 17:08-17:26/18 | 07:33 12:24-13:24/60<br>16:22                               | 08:31 12:38-13:25/47<br>15:39 11:11-11:40/29               |
| 8                           | 04:36<br>22:02 | 05:28<br>21:11 | 06:30<br>19:54                | 07:30 16:47-17:27/40<br>18:34                | 07:36 12:23-13:24/61<br>16:20                               | 08:33 12:38-13:25/47<br>15:39 11:11-11:40/29               |
| 9                           | 04:37<br>22:01 | 05:30<br>21:09 | 06:32<br>19:51                | 07:32 16:45-17:29/44<br>18:31                | 07:38 12:23-13:25/62<br>16:18 14:53-15:01/8                 | 08:34 12:39-13:25/46<br>15:38 11:11-11:41/30               |
| 10                          | 04:38<br>22:00 | 05:32<br>21:06 | 06:34<br>19:48                | 07:34 16:43-17:29/46<br>18:28                | 07:40 12:23-13:24/61<br>16:16 14:51-15:03/12                | 08:35 12:40-13:25/45<br>15:38 11:11-11:41/30               |
| 11                          | 04:40<br>21:59 | 05:34<br>21:04 | 06:36<br>19:46                | 07:36 16:42-17:29/47<br>18:26                | 07:42 12:24-13:25/61<br>16:14 14:50-15:05/15                | 08:37 12:41-13:26/45<br>15:38 11:12-11:43/31               |
| 12                          | 04:41<br>21:58 | 05:36<br>21:02 | 06:38<br>19:43                | 07:38 16:40-17:29/49<br>18:23                | 07:44 12:23-13:25/62<br>16:12 14:48-15:06/18                | 08:38 12:42-13:26/44<br>15:37 11:12-11:43/31               |
| 13                          | 04:42<br>21:57 | 05:38<br>20:59 | 06:40 18:39-18:47/8<br>19:40  | 07:40 16:39-17:29/50<br>18:21                | 07:46 12:23-13:25/62<br>16:10 14:47-15:07/20                | 08:39 12:42-13:25/43<br>15:37 11:12-11:43/31               |
| 14                          | 04:44<br>21:55 | 05:40<br>20:57 | 06:42 18:36-18:49/13<br>19:38 | 07:42 16:38-17:29/51<br>18:18                | 07:48 12:24-13:26/62<br>16:08 14:48-15:08/20                | 08:40 12:43-13:25/42<br>15:37 11:12-11:44/32               |
| 15                          | 04:45<br>21:54 | 05:42<br>20:55 | 06:44 18:34-18:50/16<br>19:35 | 07:44 16:38-17:29/51<br>18:15                | 07:51 12:24-13:25/61<br>16:06 14:47-15:09/22                | 08:41 12:43-13:26/43<br>15:37 11:12-11:44/32               |
| 16                          | 04:47<br>21:53 | 05:44<br>20:52 | 06:46 18:33-18:51/18<br>19:32 | 07:46 16:37-17:29/52<br>18:13                | 07:53 12:24-13:25/61<br>16:05 14:46-15:09/23                | 08:42 12:44-13:26/42<br>15:37 11:13-11:45/32               |
| 17                          | 04:48<br>21:51 | 05:46<br>20:50 | 06:48 18:32-18:51/19<br>19:30 | 07:48 16:37-17:28/51<br>18:10                | 07:55 12:25-13:26/61<br>16:03 14:47-15:10/23                | 08:43 12:45-13:26/41<br>15:37 11:13-11:46/33               |
| 18                          | 04:50<br>21:50 | 05:48<br>20:47 | 06:50 18:31-18:51/20<br>19:27 | 07:51 16:36-17:27/51<br>18:08                | 07:57 12:25-13:26/61<br>16:01 14:47-15:10/23                | 08:44 12:46-13:27/41<br>15:37 11:14-11:46/32               |
| 19                          | 04:52<br>21:49 | 05:50<br>20:45 | 06:52 18:31-18:51/20<br>19:24 | 07:53 16:37-17:26/49<br>18:05                | 07:59 12:25-13:25/60<br>16:00 14:47-15:10/23                | 08:45 12:46-13:27/41<br>15:37 11:14-11:47/33               |
| 20                          | 04:53<br>21:47 | 05:52<br>20:43 | 06:54 18:31-18:50/19<br>19:21 | 07:55 16:37-17:26/49<br>18:03                | 08:01 12:26-13:26/60<br>15:58 14:48-15:11/23                | 08:45 12:46-13:27/41<br>15:38 11:14-11:47/33               |
| 21                          | 04:55<br>21:45 | 05:54<br>20:40 | 06:56 18:31-18:49/18<br>19:19 | 07:57 16:37-17:24/47<br>18:00                | 08:03 12:26-13:26/60<br>15:57 14:48-15:10/22                | 08:46 12:47-13:28/41<br>15:38 11:15-11:48/33               |
| 22                          | 04:56<br>21:44 | 05:56<br>20:38 | 06:57 18:31-18:46/15<br>19:16 | 07:59 13:52-13:58/6<br>17:58 16:37-17:22/45  | 08:05 12:26-13:26/60<br>15:55 14:48-15:10/22                | 08:47 12:47-13:28/41<br>15:39 11:16-11:49/33               |
| 23                          | 04:58<br>21:42 | 05:58<br>20:35 | 06:59 18:32-18:43/11<br>19:13 | 08:01 13:45-14:06/21<br>17:56 16:38-17:20/42 | 08:07 12:27-13:25/58<br>15:54 14:48-15:10/22                | 08:47 12:48-13:29/41<br>15:39 11:16-11:49/33               |
| 24                          | 05:00<br>21:41 | 06:00<br>20:33 | 07:01 18:33-18:41/8<br>19:11  | 08:03 13:41-14:09/28<br>17:53 16:39-17:18/39 | 08:09 12:28-13:26/58<br>15:52 14:50-15:11/21                | 08:47 12:48-13:29/41<br>15:40 11:16-11:49/33               |
| 25                          | 05:02<br>21:39 | 06:02<br>20:30 | 07:03 18:36-18:38/2<br>19:08  | 07:05 12:37-13:11/34<br>16:51 15:39-16:16/37 | 08:11 12:28-13:26/58<br>15:51 14:50-15:10/20                | 08:48 12:48-13:30/42<br>15:40 11:17-11:49/32               |
| 26                          | 05:03<br>21:37 | 06:04<br>20:28 | 07:05<br>19:05                | 07:08 12:36-13:14/38<br>16:48 15:41-16:15/34 | 08:13 12:29-13:26/57<br>15:50 14:51-15:10/19                | 08:48 12:50-13:31/41<br>15:41 11:18-11:50/32               |
| 27                          | 05:05<br>21:35 | 06:06<br>20:25 | 07:07<br>19:03                | 07:10 12:33-13:15/42<br>16:46 15:43-16:13/30 | 08:15 12:30-13:26/56 14:52-15:09/17<br>15:48 11:18-11:25/7  | 08:48 12:50-13:32/42<br>15:42 11:18-11:51/33               |
| 28                          | 05:07<br>21:33 | 06:08<br>20:22 | 07:09<br>19:00                | 07:12 12:31-13:16/45<br>16:44 15:44-16:10/26 | 08:16 12:30-13:25/55 14:53-15:07/14<br>15:47 11:15-11:28/13 | 08:48 12:50-13:32/42<br>15:43 11:19-11:51/32               |
| 29                          | 05:09<br>21:31 | 06:10<br>20:20 | 07:11<br>18:57                | 07:14 12:31-13:18/47<br>16:41 15:48-16:08/20 | 08:18 12:31-13:25/54 14:54-15:06/12<br>15:46 11:14-11:30/16 | 08:49 12:49-13:32/43<br>15:44 11:19-11:51/32               |
| 30                          | 05:11<br>21:30 | 06:12<br>20:17 | 07:14<br>18:55                | 07:16 12:29-13:19/50<br>16:39 15:48-16:06/18 | 08:20 12:32-13:25/53 14:55-15:04/9<br>15:45 11:13-11:32/19  | 08:49 12:50-13:33/43<br>15:45 11:20-11:51/31               |
| 31                          | 05:13<br>21:28 | 06:14<br>20:15 |                               | 07:18 12:27-13:19/52<br>16:37 15:48-16:03/15 |   | 08:48 12:50-13:34/44<br>15:46 11:20-11:52/32               |
| Potential sun hours         | 528            | 469            | 384                           | 324  | 248   | 217  |
| Sum of minutes with flicker | 0              | 0              | 187                           | 1393   | 2252  | 2322   |

Table 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: JV1 - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 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   | 14:17-14:40/23 | 08:13    | 07:09 | 06:47 | 05:31 | 18:44-19:08/24 | 04:35 |
|                             | 15:47   |                | 16:44    | 17:46 | 19:51 | 20:53 |                | 21:50 |
| 2                           | 08:48   | 14:18-14:41/23 | 08:11    | 07:06 | 06:45 | 05:29 | 18:46-19:06/20 | 04:34 |
|                             | 15:49   |                | 16:46    | 17:48 | 19:53 | 20:55 |                | 21:51 |
| 3                           | 08:48   | 14:18-14:40/22 | 08:09    | 07:04 | 06:42 | 05:27 | 18:49-19:03/14 | 04:33 |
|                             | 15:50   |                | 16:49    | 17:50 | 19:55 | 20:57 |                | 21:53 |
| 4                           | 08:47   | 14:20-14:41/21 | 08:07    | 07:01 | 06:39 | 05:25 | 18:51-19:11/20 | 04:32 |
|                             | 15:51   |                | 16:51    | 17:53 | 19:57 | 20:59 |                | 21:54 |
| 5                           | 08:47   | 14:20-14:41/21 | 08:05    | 06:59 | 06:37 | 05:22 | 18:49-19:14/25 | 04:31 |
|                             | 15:53   |                | 16:53    | 17:55 | 19:59 | 21:01 |                | 21:55 |
| 6                           | 08:46   | 14:20-14:41/21 | 08:03    | 06:56 | 06:34 | 05:20 | 18:46-19:15/29 | 04:30 |
|                             | 15:54   |                | 16:55    | 17:57 | 20:02 | 21:03 |                | 21:57 |
| 7                           | 08:46   | 14:21-14:41/20 | 08:01    | 06:54 | 06:31 | 05:18 | 18:45-19:17/32 | 04:29 |
|                             | 15:55   |                | 16:57    | 17:59 | 20:04 | 21:06 |                | 21:58 |
| 8                           | 08:45   | 14:22-14:41/19 | 07:58    | 06:51 | 06:29 | 05:16 | 18:43-19:18/35 | 04:28 |
|                             | 15:57   |                | 17:00    | 18:01 | 20:06 | 21:08 |                | 21:59 |
| 9                           | 08:44   | 14:23-14:41/18 | 07:56    | 06:48 | 06:26 | 05:14 | 18:41-19:18/37 | 04:28 |
|                             | 15:59   |                | 17:02    | 18:03 | 20:08 | 21:10 |                | 22:00 |
| 10                          | 08:44   | 14:24-14:41/17 | 07:54    | 06:46 | 06:24 | 05:12 | 18:40-19:19/39 | 04:27 |
|                             | 16:00   |                | 17:04    | 18:05 | 20:10 | 21:12 |                | 22:01 |
| 11                          | 08:43   | 14:25-14:41/16 | 07:52    | 06:43 | 06:21 | 05:09 | 18:39-19:19/40 | 04:27 |
|                             | 16:02   |                | 17:06    | 18:07 | 20:12 | 21:13 |                | 22:02 |
| 12                          | 08:42   | 14:26-14:41/15 | 07:50    | 06:40 | 06:18 | 05:07 | 18:38-19:20/42 | 04:26 |
|                             | 16:04   |                | 17:09    | 18:10 | 20:14 | 21:15 |                | 22:03 |
| 13                          | 08:41   | 14:28-14:41/13 | 07:47    | 06:38 | 06:16 | 05:05 | 18:37-19:20/43 | 04:26 |
|                             | 16:05   |                | 17:11    | 18:12 | 20:16 | 21:17 |                | 22:03 |
| 14                          | 08:40   | 14:28-14:40/12 | 07:45    | 06:35 | 06:13 | 05:03 | 18:37-19:21/44 | 04:25 |
|                             | 16:07   |                | 17:13    | 18:14 | 20:18 | 21:19 |                | 22:04 |
| 15                          | 08:39   | 14:31-14:39/8  | 07:43    | 06:33 | 06:11 | 05:02 | 18:36-19:20/44 | 04:25 |
|                             | 16:09   |                | 17:15    | 18:16 | 20:20 | 21:21 |                | 22:05 |
| 16                          | 08:38   |                | 07:41    | 06:30 | 06:08 | 05:00 | 18:36-19:21/45 | 04:25 |
|                             | 16:11   |                | 17:18    | 18:18 | 20:22 | 21:23 |                | 22:05 |
| 17                          | 08:36   |                | 07:38    | 06:27 | 06:05 | 04:58 | 18:35-19:20/45 | 04:25 |
|                             | 16:13   |                | 17:20    | 18:20 | 20:24 | 21:25 |                | 22:06 |
| 18                          | 08:35   |                | 07:36    | 06:25 | 06:03 | 04:56 | 18:36-19:20/44 | 04:25 |
|                             | 16:15   |                | 17:22    | 18:22 | 20:26 | 21:27 |                | 22:06 |
| 19                          | 08:34   |                | 07:34    | 06:22 | 06:00 | 04:54 | 18:35-19:19/44 | 04:24 |
|                             | 16:17   |                | 17:24    | 18:24 | 20:28 | 21:29 |                | 22:07 |
| 20                          | 08:32   |                | 07:31    | 06:19 | 05:58 | 04:52 | 18:35-19:19/44 | 04:25 |
|                             | 16:19   |                | 17:26    | 18:26 | 20:31 | 21:31 |                | 22:07 |
| 21                          | 08:31   |                | 07:29    | 06:17 | 05:55 | 04:51 | 18:36-19:19/43 | 04:25 |
|                             | 16:21   |                | 17:29    | 18:28 | 20:33 | 21:32 |                | 22:07 |
| 22                          | 08:30   |                | 07:26    | 06:14 | 05:53 | 04:49 | 18:35-19:18/43 | 04:25 |
|                             | 16:23   |                | 17:31    | 18:31 | 20:35 | 21:34 |                | 22:08 |
| 23                          | 08:28   |                | 07:24    | 06:11 | 05:50 | 04:47 | 18:36-19:17/41 | 04:25 |
|                             | 16:25   |                | 17:33    | 18:33 | 20:37 | 21:36 |                | 22:08 |
| 24                          | 08:27   |                | 07:21    | 06:09 | 05:48 | 04:46 | 18:37-19:17/40 | 04:25 |
|                             | 16:27   |                | 17:35    | 18:35 | 20:39 | 21:38 |                | 22:08 |
| 25                          | 08:25   |                | 07:19    | 06:06 | 05:46 | 04:44 | 18:37-19:15/38 | 04:26 |
|                             | 16:29   |                | 17:37    | 18:37 | 20:41 | 21:39 |                | 22:08 |
| 26                          | 08:23   |                | 07:16    | 06:03 | 05:43 | 04:43 | 18:38-19:15/37 | 04:26 |
|                             | 16:31   |                | 17:40    | 18:39 | 20:43 | 21:41 |                | 22:08 |
| 27                          | 08:22   |                | 07:14    | 06:01 | 05:41 | 04:41 | 18:39-19:14/35 | 04:27 |
|                             | 16:33   |                | 17:42    | 18:41 | 20:45 | 21:43 |                | 22:08 |
| 28                          | 08:20   |                | 07:11    | 05:58 | 05:38 | 04:40 | 18:40-19:13/33 | 04:27 |
|                             | 16:35   |                | 17:44    | 18:43 | 20:47 | 21:44 |                | 22:07 |
| 29                          | 08:18   |                |          | 06:55 | 05:36 | 04:39 | 18:40-19:11/31 | 04:28 |
|                             | 16:38   |                |          | 19:45 | 20:49 | 21:46 |                | 22:07 |
| 30                          | 08:16   |                |          | 06:53 | 05:34 | 04:37 | 18:42-19:09/27 | 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   |
| Sum of minutes with flicker | 269     | 0              | 0        | 1033  | 58    | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: JV1 - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 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<br>22:06 | 05:15<br>21:26 | 06:16<br>20:12 | 18:38-19:18/40<br>07:16<br>18:52 | 16:35<br>07:21<br>16:35          | 08:22<br>15:44 |
| 2                           | 04:30<br>22:06 | 05:17<br>21:24 | 06:18<br>20:09 | 18:38-19:17/39<br>07:18<br>18:49 | 16:33<br>07:23<br>16:33          | 08:23<br>15:43 |
| 3                           | 04:31<br>22:05 | 05:18<br>21:22 | 06:20<br>20:07 | 18:39-19:16/37<br>07:20<br>18:47 | 16:30<br>07:25<br>16:30          | 08:25<br>15:42 |
| 4                           | 04:32<br>22:05 | 05:20<br>21:19 | 06:22<br>20:04 | 18:40-19:15/35<br>07:22<br>18:44 | 16:28<br>07:27<br>16:28          | 08:27<br>15:41 |
| 5                           | 04:33<br>22:04 | 05:22<br>21:17 | 06:24<br>20:02 | 18:41-19:13/32<br>07:24<br>18:41 | 16:26<br>07:29<br>16:26          | 08:28<br>15:41 |
| 6                           | 04:34<br>22:03 | 05:24<br>21:15 | 06:26<br>19:59 | 18:42-19:12/30<br>07:26<br>18:39 | 16:24<br>07:31<br>16:24          | 08:30<br>15:40 |
| 7                           | 04:35<br>22:03 | 05:26<br>21:13 | 06:28<br>19:56 | 18:44-19:09/25<br>07:28<br>18:36 | 16:22<br>07:34<br>16:22          | 08:31<br>15:39 |
| 8                           | 04:36<br>22:02 | 05:28<br>21:11 | 06:30<br>19:54 | 18:46-19:07/21<br>07:30<br>18:34 | 16:20<br>07:36<br>16:20          | 08:33<br>15:39 |
| 9                           | 04:37<br>22:01 | 05:30<br>21:09 | 06:32<br>19:51 | 18:49-19:03/14<br>07:32<br>18:31 | 16:18<br>07:38<br>16:18          | 08:34<br>15:38 |
| 10                          | 04:39<br>22:00 | 05:32<br>21:06 | 06:34<br>19:48 | 18:57-19:12/15<br>07:34<br>18:28 | 16:16<br>07:40<br>16:16          | 08:35<br>15:38 |
| 11                          | 04:40<br>21:59 | 05:34<br>21:04 | 06:36<br>19:46 | 18:54-19:15/21<br>07:36<br>18:26 | 16:14<br>07:42<br>16:14          | 08:37<br>15:38 |
| 12                          | 04:41<br>21:58 | 05:36<br>21:02 | 06:38<br>19:43 | 18:52-19:17/25<br>07:38<br>18:23 | 16:12<br>07:44<br>16:12          | 08:38<br>15:37 |
| 13                          | 04:43<br>21:57 | 05:38<br>20:59 | 06:40<br>19:40 | 18:50-19:18/28<br>07:40<br>18:21 | 16:10<br>07:46<br>16:10          | 08:39<br>15:37 |
| 14                          | 04:44<br>21:55 | 05:40<br>20:57 | 06:42<br>19:38 | 18:49-19:20/31<br>07:42<br>18:18 | 16:08<br>07:48<br>16:08          | 08:40<br>15:37 |
| 15                          | 04:45<br>21:54 | 05:42<br>20:55 | 06:44<br>19:35 | 18:46-19:20/34<br>07:44<br>18:16 | 16:07<br>07:51<br>16:07          | 08:41<br>15:37 |
| 16                          | 04:47<br>21:53 | 05:44<br>20:52 | 06:46<br>19:32 | 18:45-19:21/36<br>07:46<br>18:13 | 16:05<br>07:53<br>16:05          | 08:42<br>15:37 |
| 17                          | 04:48<br>21:51 | 05:46<br>20:50 | 06:48<br>19:30 | 18:44-19:21/37<br>07:48<br>18:10 | 16:03<br>07:55<br>16:03          | 08:43<br>15:37 |
| 18                          | 04:50<br>21:50 | 05:48<br>20:47 | 06:50<br>19:27 | 18:43-19:22/39<br>07:51<br>18:08 | 16:01<br>07:57<br>16:01          | 08:44<br>15:37 |
| 19                          | 04:52<br>21:49 | 05:50<br>20:45 | 06:52<br>19:24 | 18:42-19:23/41<br>07:53<br>18:05 | 16:00<br>07:59<br>16:00          | 08:45<br>15:37 |
| 20                          | 04:53<br>21:47 | 05:52<br>20:43 | 06:54<br>19:21 | 18:42-19:23/41<br>07:55<br>18:03 | 16:01<br>08:01<br>15:58          | 08:45<br>15:38 |
| 21                          | 04:55<br>21:45 | 05:54<br>20:40 | 06:56<br>19:19 | 18:41-19:23/42<br>07:57<br>18:01 | 15:57<br>08:03<br>15:57          | 08:46<br>15:38 |
| 22                          | 04:57<br>21:44 | 05:56<br>20:38 | 06:58<br>19:16 | 18:40-19:24/44<br>07:59<br>17:58 | 15:55<br>08:05<br>15:55          | 08:47<br>15:39 |
| 23                          | 04:58<br>21:42 | 05:58<br>20:35 | 07:00<br>19:13 | 18:39-19:23/44<br>08:01<br>17:56 | 15:54<br>08:07<br>15:54          | 08:47<br>15:39 |
| 24                          | 05:00<br>21:41 | 06:00<br>20:33 | 07:02<br>19:11 | 18:38-19:23/45<br>08:03<br>17:53 | 15:52<br>08:09<br>15:52          | 08:47<br>15:40 |
| 25                          | 05:02<br>21:39 | 06:02<br>20:30 | 07:04<br>19:08 | 18:38-19:23/45<br>08:05<br>16:51 | 15:51<br>08:11<br>15:51          | 08:48<br>15:40 |
| 26                          | 05:04<br>21:37 | 06:04<br>20:28 | 07:06<br>19:05 | 18:38-19:23/45<br>08:07<br>16:49 | 15:50<br>08:13<br>15:50          | 08:48<br>15:41 |
| 27                          | 05:05<br>21:35 | 06:06<br>20:25 | 07:08<br>19:03 | 18:38-19:22/44<br>08:10<br>16:46 | 15:48<br>08:15<br>15:48          | 08:48<br>15:42 |
| 28                          | 05:07<br>21:33 | 06:08<br>20:22 | 07:10<br>19:00 | 18:38-19:22/44<br>08:12<br>16:44 | 15:47<br>14:09-14:20/11<br>15:47 | 08:48<br>15:43 |
| 29                          | 05:09<br>21:31 | 06:10<br>20:20 | 07:12<br>18:57 | 18:38-19:21/43<br>08:14<br>16:42 | 15:46<br>14:08-14:21/13<br>15:46 | 08:49<br>15:44 |
| 30                          | 05:11<br>21:30 | 06:12<br>20:17 | 07:14<br>18:55 | 18:38-19:21/43<br>08:16<br>16:39 | 15:45<br>14:07-14:22/15<br>15:45 | 08:49<br>15:45 |
| 31                          | 05:13<br>21:28 | 06:14<br>20:15 | 18:37-19:19/42 | 08:18<br>16:37                   | 15:44                            | 08:48<br>15:46 |
| Potential sun hours         | 528            | 469            | 384            | 324                              | 248                              | 217            |
| Sum of minutes with flicker | 0              | 835            | 273            | 0                                | 47                               | 677            |

Table 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 |

Flickering\_Vestas\_V162\_Prikuli\_B

SIA Estonian, Latvian & Lithuanian environment  
Vilandes 3-6  
LV-1010 Riga  
0037167242411  
Laura Kurzemniece / laura.kurzemniece@environment.lv  
Calculated:  
16.07.2025 13:21/4.1.254

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: JU1 - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 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

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 |

[illegible]

| 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: O1.b - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 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 14:37-14:59/22<br>15:47 | 08:13<br>16:44                | 07:09<br>17:46 | 06:47<br>19:51 | 05:31<br>20:53                | 04:35 20:20-20:44/24<br>21:50 |
| 2                           | 08:48 14:38-15:00/22<br>15:49 | 08:11<br>16:46                | 07:06<br>17:48 | 06:45<br>19:53 | 05:29<br>20:55                | 04:34 20:21-20:44/23<br>21:52 |
| 3                           | 08:48 14:38-15:00/22<br>15:50 | 08:09<br>16:49                | 07:04<br>17:50 | 06:42<br>19:55 | 05:27<br>20:57                | 04:33 20:21-20:44/23<br>21:53 |
| 4                           | 08:47 14:39-15:01/22<br>15:51 | 08:07<br>16:51                | 07:01<br>17:53 | 06:39<br>19:57 | 05:25<br>20:59                | 04:32 20:21-20:43/22<br>21:54 |
| 5                           | 08:47 14:39-15:01/22<br>15:53 | 08:05<br>16:53                | 06:59<br>17:55 | 06:37<br>20:00 | 05:22<br>21:02                | 04:31 20:23-20:44/21<br>21:55 |
| 6                           | 08:46 14:39-15:02/23<br>15:54 | 08:03 16:13-16:22/9<br>16:55  | 06:56<br>17:57 | 06:34<br>20:02 | 05:20<br>21:04                | 04:30 20:23-20:43/20<br>21:57 |
| 7                           | 08:46 14:39-15:02/23<br>15:55 | 08:01 16:12-16:24/12<br>16:57 | 06:54<br>17:59 | 06:31<br>20:04 | 05:18<br>21:06                | 04:29 20:23-20:43/20<br>21:58 |
| 8                           | 08:45 14:39-15:03/24<br>15:57 | 07:58 16:10-16:26/16<br>17:00 | 06:51<br>18:01 | 06:29<br>20:06 | 05:16<br>21:08                | 04:28 20:24-20:43/19<br>21:59 |
| 9                           | 08:44 14:40-15:03/23<br>15:59 | 07:56 16:09-16:28/19<br>17:02 | 06:48<br>18:03 | 06:26<br>20:08 | 05:14 20:28-20:35/7<br>21:10  | 04:28 20:24-20:42/18<br>22:00 |
| 10                          | 08:44 14:40-15:03/23<br>16:00 | 07:54 16:08-16:30/22<br>17:04 | 06:46<br>18:05 | 06:24<br>20:10 | 05:12 20:25-20:38/13<br>21:12 | 04:27 20:26-20:42/16<br>22:01 |
| 11                          | 08:43 14:41-15:04/23<br>16:02 | 07:52 16:07-16:30/23<br>17:06 | 06:43<br>18:08 | 06:21<br>20:12 | 05:09 20:23-20:39/16<br>21:14 | 04:27 20:26-20:42/16<br>22:02 |
| 12                          | 08:42 14:42-15:04/22<br>16:04 | 07:50 16:07-16:30/23<br>17:09 | 06:40<br>18:10 | 06:18<br>20:14 | 05:07 20:21-20:40/19<br>21:16 | 04:26 20:27-20:42/15<br>22:03 |
| 13                          | 08:41 14:42-15:05/23<br>16:05 | 07:48 16:07-16:31/24<br>17:11 | 06:38<br>18:12 | 06:16<br>20:16 | 05:05 20:20-20:41/21<br>21:17 | 04:26 20:27-20:42/15<br>22:03 |
| 14                          | 08:40 14:42-15:05/23<br>16:07 | 07:45 16:07-16:31/24<br>17:13 | 06:35<br>18:14 | 06:13<br>20:18 | 05:03 20:19-20:42/23<br>21:19 | 04:25 20:28-20:42/14<br>22:04 |
| 15                          | 08:39 14:43-15:05/22<br>16:09 | 07:43 16:07-16:31/24<br>17:15 | 06:33<br>18:16 | 06:11<br>20:20 | 05:02 20:19-20:43/24<br>21:21 | 04:25 20:28-20:41/13<br>22:05 |
| 16                          | 08:38 14:44-15:06/22<br>16:11 | 07:41 16:07-16:30/23<br>17:18 | 06:30<br>18:18 | 06:08<br>20:22 | 05:00 20:18-20:43/25<br>21:23 | 04:25 20:29-20:41/12<br>22:05 |
| 17                          | 08:36 14:45-15:05/20<br>16:13 | 07:38 16:08-16:30/22<br>17:20 | 06:27<br>18:20 | 06:05<br>20:24 | 04:58 20:17-20:43/26<br>21:25 | 04:25 20:29-20:41/12<br>22:06 |
| 18                          | 08:35 14:46-15:05/19<br>16:15 | 07:36 16:08-16:29/21<br>17:22 | 06:25<br>18:22 | 06:03<br>20:26 | 04:56 20:18-20:44/26<br>21:27 | 04:24 20:30-20:41/11<br>22:06 |
| 19                          | 08:34 14:46-15:05/19<br>16:17 | 07:34 16:09-16:29/20<br>17:24 | 06:22<br>18:24 | 06:00<br>20:29 | 04:54 20:17-20:44/27<br>21:29 | 04:24 20:30-20:41/11<br>22:07 |
| 20                          | 08:33 14:47-15:04/17<br>16:19 | 07:31 16:10-16:27/17<br>17:26 | 06:19<br>18:26 | 05:58<br>20:31 | 04:52 20:18-20:45/27<br>21:31 | 04:24 20:30-20:41/11<br>22:07 |
| 21                          | 08:31 14:49-15:04/15<br>16:21 | 07:29 16:12-16:26/14<br>17:29 | 06:17<br>18:28 | 05:55<br>20:33 | 04:51 20:17-20:44/27<br>21:32 | 04:25 20:31-20:42/11<br>22:07 |
| 22                          | 08:30 14:51-15:03/12<br>16:23 | 07:26 16:15-16:22/7<br>17:31  | 06:14<br>18:31 | 05:53<br>20:35 | 04:49 20:17-20:45/28<br>21:34 | 04:25 20:31-20:42/11<br>22:08 |
| 23                          | 08:28 14:53-15:01/8<br>16:25  | 07:24<br>17:33                | 06:11<br>18:33 | 05:50<br>20:37 | 04:47 20:17-20:44/27<br>21:36 | 04:25 20:31-20:42/11<br>22:08 |
| 24                          | 08:27<br>16:27                | 07:21<br>17:35                | 06:09<br>18:35 | 05:48<br>20:39 | 04:46 20:17-20:45/28<br>21:38 | 04:25 20:32-20:43/11<br>22:08 |
| 25                          | 08:25<br>16:29                | 07:19<br>17:37                | 06:06<br>18:37 | 05:46<br>20:41 | 04:44 20:18-20:45/27<br>21:39 | 04:26 20:31-20:43/12<br>22:08 |
| 26                          | 08:23<br>16:31                | 07:17<br>17:40                | 06:03<br>18:39 | 05:43<br>20:43 | 04:43 20:18-20:45/27<br>21:41 | 04:26 20:31-20:43/12<br>22:08 |
| 27                          | 08:22<br>16:33                | 07:14<br>17:42                | 06:01<br>18:41 | 05:41<br>20:45 | 04:41 20:18-20:45/27<br>21:43 | 04:27 20:31-20:44/13<br>22:08 |
| 28                          | 08:20<br>16:35                | 07:11<br>17:44                | 05:58<br>18:43 | 05:38<br>20:47 | 04:40 20:18-20:45/27<br>21:44 | 04:27 20:31-20:44/13<br>22:07 |
| 29                          | 08:18<br>16:38                |                               | 06:55<br>19:45 | 05:36<br>20:49 | 04:39 20:19-20:45/26<br>21:46 | 04:28 20:31-20:45/14<br>22:07 |
| 30                          | 08:16<br>16:40                |                               | 06:53<br>19:47 | 05:34<br>20:51 | 04:37 20:19-20:45/26<br>21:47 | 04:29 20:31-20:46/15<br>22:07 |
| 31                          | 08:15<br>16:42                |                               | 06:50<br>19:49 |                | 04:36 20:20-20:44/24<br>21:49 |                               |
| Potential sun hours         | 236                           | 266                           | 366            | 426            | 507                           | 528                           |
| Sum of minutes with flicker | 471                           | 320                           | 0              | 0              | 548                           | 459                           |

Table 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: O1.b - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 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 20:30-20:46/16<br>22:06 | 05:15 20:32-20:50/18<br>21:26 | 06:16 20:12<br>20:12          | 07:16 18:52<br>20:12          | 07:21 15:38-15:59/21<br>16:35 | 08:22 14:23-14:46/23<br>15:44 |
| 2                           | 04:30 20:30-20:46/16<br>22:06 | 05:17 20:34-20:49/15<br>21:24 | 06:18 20:10<br>20:10          | 07:18 18:49<br>20:10          | 07:23 15:39-15:58/19<br>16:33 | 08:24 14:23-14:47/24<br>15:43 |
| 3                           | 04:31 20:30-20:47/17<br>22:05 | 05:18 20:36-20:47/11<br>21:22 | 06:20 20:07<br>20:07          | 07:20 18:47<br>20:07          | 07:25 15:39-15:56/17<br>16:30 | 08:25 14:24-14:47/23<br>15:42 |
| 4                           | 04:32 20:30-20:48/18<br>22:05 | 05:20 20:39-20:42/3<br>21:19  | 06:22 20:04<br>20:04          | 07:22 18:44<br>20:04          | 07:27 15:42-15:54/12<br>16:28 | 08:27 14:25-14:48/23<br>15:41 |
| 5                           | 04:33 20:30-20:49/19<br>22:04 | 05:22 21:17<br>21:17          | 06:24 20:02<br>20:02          | 07:24 18:41<br>20:02          | 07:29 15:44-15:51/7<br>16:26  | 08:28 14:24-14:47/23<br>15:41 |
| 6                           | 04:34 20:29-20:49/20<br>22:03 | 05:24 21:15<br>21:15          | 06:26 19:59<br>19:59          | 07:26 18:39<br>18:39          | 07:31 16:24<br>16:24          | 08:30 14:25-14:48/23<br>15:40 |
| 7                           | 04:35 20:29-20:50/21<br>22:03 | 05:26 21:13<br>21:13          | 06:28 19:56<br>19:56          | 07:28 18:36<br>18:36          | 07:34 16:22<br>16:22          | 08:31 14:26-14:48/22<br>15:39 |
| 8                           | 04:36 20:29-20:50/21<br>22:02 | 05:28 21:11<br>21:11          | 06:30 19:54<br>19:54          | 07:30 18:34<br>18:34          | 07:36 16:20<br>16:20          | 08:33 14:26-14:48/22<br>15:39 |
| 9                           | 04:37 20:29-20:51/22<br>22:01 | 05:30 21:09<br>21:09          | 06:32 19:51<br>19:51          | 07:32 18:31<br>18:31          | 07:38 16:18<br>16:18          | 08:34 14:27-14:49/22<br>15:38 |
| 10                          | 04:39 20:28-20:51/23<br>22:00 | 05:32 21:06<br>21:06          | 06:34 19:48<br>19:48          | 07:34 18:28<br>18:28          | 07:40 16:16<br>16:16          | 08:36 14:27-14:49/22<br>15:38 |
| 11                          | 04:40 20:28-20:52/24<br>21:59 | 05:34 21:04<br>21:04          | 06:36 19:46<br>19:46          | 07:36 18:26<br>18:26          | 07:42 16:14<br>16:14          | 08:37 14:28-14:50/22<br>15:38 |
| 12                          | 04:41 20:28-20:53/25<br>21:58 | 05:36 21:02<br>21:02          | 06:38 19:43<br>19:43          | 07:38 18:23<br>18:23          | 07:44 16:12<br>16:12          | 08:38 14:29-14:50/21<br>15:37 |
| 13                          | 04:43 20:28-20:53/25<br>21:57 | 05:38 20:59<br>20:59          | 06:40 19:40<br>19:40          | 07:40 18:21<br>18:21          | 07:46 16:10<br>16:10          | 08:39 14:29-14:50/21<br>15:37 |
| 14                          | 04:44 20:27-20:53/26<br>21:55 | 05:40 20:57<br>20:57          | 06:42 19:38<br>19:38          | 07:42 18:18<br>18:18          | 07:49 16:08<br>16:08          | 08:40 14:29-14:50/21<br>15:37 |
| 15                          | 04:45 20:27-20:53/26<br>21:54 | 05:42 20:55<br>20:55          | 06:44 19:35<br>19:35          | 07:44 18:16<br>18:16          | 07:51 16:07<br>16:07          | 08:41 14:30-14:50/20<br>15:37 |
| 16                          | 04:47 20:28-20:54/26<br>21:53 | 05:44 20:52<br>20:52          | 06:46 19:32<br>19:32          | 07:46 18:13<br>18:13          | 07:53 16:05<br>16:05          | 08:42 14:31-14:51/20<br>15:37 |
| 17                          | 04:48 20:27-20:54/27<br>21:52 | 05:46 20:50<br>20:50          | 06:48 19:30<br>19:30          | 07:48 18:11<br>18:11          | 07:55 16:03<br>16:03          | 08:43 14:31-14:51/20<br>15:37 |
| 18                          | 04:50 20:28-20:55/27<br>21:50 | 05:48 20:48<br>20:48          | 06:50 19:27<br>19:27          | 07:51 18:08<br>18:08          | 07:57 16:01<br>16:01          | 08:44 14:32-14:52/20<br>15:37 |
| 19                          | 04:52 20:27-20:55/28<br>21:49 | 05:50 20:45<br>20:45          | 06:52 19:24<br>19:24          | 07:53 18:06<br>18:06          | 07:59 14:27-14:35/8<br>16:00  | 08:45 14:33-14:52/19<br>15:37 |
| 20                          | 04:53 20:28-20:55/27<br>21:47 | 05:52 20:43<br>20:43          | 06:54 19:22<br>19:22          | 07:55 16:45-16:54/9<br>18:03  | 08:01 14:26-14:38/12<br>15:58 | 08:45 14:33-14:52/19<br>15:38 |
| 21                          | 04:55 20:27-20:55/28<br>21:46 | 05:54 20:40<br>20:40          | 06:56 19:19<br>19:19          | 07:57 16:42-16:56/14<br>18:01 | 08:03 14:24-14:39/15<br>15:57 | 08:46 14:33-14:53/20<br>15:38 |
| 22                          | 04:57 20:28-20:55/27<br>21:44 | 05:56 20:38<br>20:38          | 06:58 19:16<br>19:16          | 07:59 16:40-16:58/18<br>17:58 | 08:05 14:23-14:40/17<br>15:55 | 08:47 14:34-14:54/20<br>15:39 |
| 23                          | 04:58 20:27-20:55/28<br>21:42 | 05:58 20:35<br>20:35          | 07:00 19:13<br>19:13          | 08:01 16:39-16:59/20<br>17:56 | 08:07 14:24-14:42/18<br>15:54 | 08:47 14:35-14:54/19<br>15:39 |
| 24                          | 05:00 20:28-20:55/27<br>21:41 | 06:00 20:33<br>20:33          | 07:02 19:11<br>19:11          | 08:03 16:38-17:00/22<br>17:53 | 08:09 14:23-14:42/19<br>15:52 | 08:48 14:35-14:54/19<br>15:40 |
| 25                          | 05:02 20:28-20:54/26<br>21:39 | 06:02 20:30<br>20:30          | 07:04 19:08<br>19:08          | 07:05 15:37-16:00/23<br>16:51 | 08:11 14:23-14:43/20<br>15:51 | 08:48 14:35-14:54/19<br>15:40 |
| 26                          | 05:04 20:28-20:54/26<br>21:37 | 06:04 20:28<br>20:28          | 07:06 19:05<br>19:05          | 07:08 15:37-16:01/24<br>16:49 | 08:13 14:22-14:44/22<br>15:50 | 08:48 14:36-14:56/20<br>15:41 |
| 27                          | 05:05 20:29-20:54/25<br>21:35 | 06:06 20:25<br>20:25          | 07:08 19:03<br>19:03          | 07:10 15:37-16:00/23<br>16:46 | 08:15 14:22-14:44/22<br>15:48 | 08:48 14:36-14:56/20<br>15:42 |
| 28                          | 05:07 20:29-20:53/24<br>21:33 | 06:08 20:22<br>20:22          | 07:10 19:00<br>19:00          | 07:12 15:36-16:00/24<br>16:44 | 08:17 14:22-14:45/23<br>15:47 | 08:49 14:37-14:57/20<br>15:43 |
| 29                          | 05:09 20:30-20:53/23<br>21:32 | 06:10 20:20<br>20:20          | 07:12 18:57<br>18:57          | 07:14 15:37-16:01/24<br>16:42 | 08:18 14:22-14:45/23<br>15:46 | 08:49 14:36-14:57/21<br>15:44 |
| 30                          | 05:11 20:31-20:53/22<br>21:30 | 06:12 20:17<br>20:17          | 07:14 18:55<br>18:55          | 07:16 15:37-16:00/23<br>16:39 | 08:20 14:23-14:46/23<br>15:45 | 08:49 14:37-14:58/21<br>15:45 |
| 31                          | 05:13 20:31-20:51/20<br>21:28 | 06:14 20:15<br>20:15          | 07:18 15:37-15:59/22<br>16:37 | 07:18 15:37-15:59/22<br>16:37 | 07:18 15:37-15:59/22<br>16:37 | 08:48 14:37-14:58/21<br>15:46 |
| Potential sun hours         | 528                           | 469                           | 384                           | 324                           | 248                           | 217                           |
| Sum of minutes with flicker | 730                           | 47                            | 0                             | 246                           | 298                           | 650                           |

Table 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: O2 - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 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<br>15:47 | 08:13<br>16:44 | 07:09<br>17:46 | 06:47<br>19:51 | 17:31-18:15/44<br>20:53          | 05:31<br>21:50 |
| 2                           | 08:48<br>15:48 | 08:11<br>16:46 | 07:06<br>17:48 | 06:45<br>19:53 | 17:32-18:14/42<br>20:55          | 05:29<br>21:52 |
| 3                           | 08:48<br>15:50 | 08:09<br>16:48 | 07:04<br>17:50 | 06:42<br>19:55 | 17:32-18:13/41<br>20:57          | 05:27<br>21:53 |
| 4                           | 08:47<br>15:51 | 08:07<br>16:51 | 07:01<br>17:53 | 06:39<br>19:57 | 17:33-18:11/38<br>21:00          | 05:24<br>21:54 |
| 5                           | 08:47<br>15:52 | 08:05<br>16:53 | 06:59<br>17:55 | 06:37<br>20:00 | 17:35-18:10/35<br>21:02          | 05:22<br>21:55 |
| 6                           | 08:46<br>15:54 | 08:03<br>16:55 | 06:56<br>17:57 | 06:34<br>20:02 | 17:36-18:07/31<br>21:04          | 05:20<br>21:57 |
| 7                           | 08:46<br>15:55 | 08:01<br>16:57 | 06:54<br>17:59 | 06:31<br>20:04 | 17:39-18:05/26<br>21:06          | 05:18<br>21:58 |
| 8                           | 08:45<br>15:57 | 07:59<br>17:00 | 06:51<br>18:01 | 06:29<br>20:06 | 17:41-18:02/21<br>21:08          | 05:16<br>21:59 |
| 9                           | 08:45<br>15:58 | 07:56<br>17:02 | 06:48<br>18:03 | 06:26<br>20:08 | 19:34-19:38/4<br>17:45-17:57/12  | 05:14<br>21:10 |
| 10                          | 08:44<br>16:00 | 07:54<br>17:04 | 06:46<br>18:05 | 06:23<br>20:10 | 19:32-19:41/9<br>21:12           | 05:11<br>22:01 |
| 11                          | 08:43<br>16:02 | 07:52<br>17:06 | 06:43<br>18:07 | 06:21<br>20:12 | 19:30-19:42/12<br>17:35-17:39/4  | 05:09<br>21:14 |
| 12                          | 08:42<br>16:04 | 07:50<br>17:09 | 06:40<br>18:10 | 06:18<br>20:14 | 19:29-19:45/16<br>17:33-17:42/9  | 05:07<br>21:16 |
| 13                          | 08:41<br>16:05 | 07:48<br>17:11 | 06:38<br>18:12 | 06:16<br>20:16 | 19:28-19:46/18<br>17:30-17:43/11 | 05:05<br>21:18 |
| 14                          | 08:40<br>16:07 | 07:45<br>17:13 | 06:35<br>18:14 | 06:13<br>20:18 | 19:28-19:49/21<br>17:30-17:45/15 | 05:03<br>21:19 |
| 15                          | 08:39<br>16:09 | 07:43<br>17:15 | 06:33<br>18:16 | 06:11<br>20:20 | 19:27-19:49/22<br>17:30-17:48/18 | 05:01<br>21:21 |
| 16                          | 08:38<br>16:11 | 07:41<br>17:17 | 06:30<br>18:18 | 06:08<br>20:22 | 19:27-19:50/23<br>17:30-17:48/18 | 05:00<br>21:23 |
| 17                          | 08:37<br>16:13 | 07:38<br>17:20 | 06:27<br>18:20 | 06:05<br>20:24 | 19:26-19:49/23<br>17:29-17:47/18 | 04:58<br>21:25 |
| 18                          | 08:35<br>16:15 | 07:36<br>17:22 | 06:25<br>18:22 | 06:03<br>20:26 | 19:27-19:49/22<br>17:30-17:47/17 | 04:56<br>21:27 |
| 19                          | 08:34<br>16:17 | 07:34<br>17:24 | 06:22<br>18:24 | 06:00<br>20:29 | 19:27-19:48/21<br>17:30-17:46/16 | 04:54<br>21:29 |
| 20                          | 08:33<br>16:19 | 07:31<br>17:26 | 06:19<br>18:26 | 05:58<br>20:31 | 19:28-19:47/19<br>17:31-17:44/13 | 04:52<br>21:31 |
| 21                          | 08:31<br>16:21 | 07:29<br>17:29 | 06:17<br>18:28 | 05:55<br>20:33 | 19:30-19:47/17<br>17:33-17:41/8  | 04:51<br>21:32 |
| 22                          | 08:30<br>16:23 | 07:26<br>17:31 | 06:14<br>18:31 | 05:53<br>20:35 | 19:30-19:45/15<br>16:30-17:21/51 | 04:49<br>21:34 |
| 23                          | 08:28<br>16:25 | 07:24<br>17:33 | 06:11<br>18:33 | 05:50<br>20:37 | 19:32-19:43/11<br>16:30-17:21/51 | 04:47<br>21:36 |
| 24                          | 08:27<br>16:27 | 07:21<br>17:35 | 06:09<br>18:35 | 05:48<br>20:39 | 19:45-19:57/12<br>19:36-19:40/4  | 04:46<br>21:38 |
| 25                          | 08:25<br>16:29 | 07:19<br>17:37 | 06:06<br>18:37 | 05:46<br>20:41 | 19:41-19:59/18<br>19:41-19:57/14 | 04:44<br>21:39 |
| 26                          | 08:23<br>16:31 | 07:17<br>17:40 | 06:03<br>18:39 | 05:43<br>20:43 | 19:39-20:02/23<br>16:29-17:20/51 | 04:43<br>21:41 |
| 27                          | 08:22<br>16:33 | 07:14<br>17:42 | 06:01<br>18:41 | 05:41<br>20:45 | 19:38-20:03/25<br>16:29-17:19/50 | 04:41<br>21:43 |
| 28                          | 08:20<br>16:35 | 07:11<br>17:44 | 05:58<br>18:43 | 05:38<br>20:47 | 19:36-20:04/28<br>17:29-18:18/49 | 04:40<br>21:44 |
| 29                          | 08:18<br>16:37 |                | 06:55<br>19:45 | 05:36<br>20:49 | 19:35-20:05/30<br>17:29-18:17/48 | 04:39<br>21:46 |
| 30                          | 08:16<br>16:40 |                | 06:53<br>19:47 | 05:34<br>20:51 | 19:34-20:06/32<br>17:30-18:16/46 | 04:37<br>21:47 |
| 31                          | 08:15<br>16:42 |                | 06:50<br>19:49 |                |                                  | 04:36<br>21:49 |
| Potential sun hours         | 236            | 266            | 366            | 426            | 507                              | 528            |
| Sum of minutes with flicker | 0              | 0              | 1146           | 715            | 783                              | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: O2 - VESTAS V162-6.2 6200 162.0 !OI! hub: 166,0 m (TOT: 247,0 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<br>22:07                | 05:15 19:42-20:17/35<br>21:26 | 06:16 19:29-19:41/12<br>20:12               | 07:16 17:20-17:55/35<br>18:52 18:12-18:22/10 | 07:21<br>16:35 | 08:22<br>15:44 |
| 2                           | 04:30<br>22:06                | 05:16 19:42-20:17/35<br>21:24 | 06:18 19:30-19:39/9<br>20:10                | 07:18 17:22-17:52/30<br>18:49 18:13-18:19/6  | 07:23<br>16:33 | 08:24<br>15:43 |
| 3                           | 04:31<br>22:06                | 05:18 19:41-20:18/37<br>21:22 | 06:20 19:32-19:36/4<br>20:07 17:43-17:55/12 | 07:20 17:24-17:50/26<br>18:47 18:15-18:16/1  | 07:25<br>16:30 | 08:25<br>15:42 |
| 4                           | 04:32<br>22:05                | 05:20 19:41-20:17/36<br>21:20 | 06:22 17:38-17:59/21<br>20:04               | 07:22 17:26-17:46/20<br>18:44                | 07:27<br>16:28 | 08:27<br>15:41 |
| 5                           | 04:33<br>22:04                | 05:22 19:41-20:17/36<br>21:17 | 06:24 17:35-18:01/26<br>20:02               | 07:24 17:31-17:41/10<br>18:41                | 07:29<br>16:26 | 08:28<br>15:41 |
| 6                           | 04:34<br>22:04                | 05:24 19:41-20:17/36<br>21:15 | 06:26 17:33-18:03/30<br>19:59               | 07:26<br>18:39                               | 07:31<br>16:24 | 08:30<br>15:40 |
| 7                           | 04:35<br>22:03                | 05:26 19:41-20:17/36<br>21:13 | 06:28 17:30-18:05/35<br>19:56               | 07:28<br>18:36                               | 07:34<br>16:22 | 08:31<br>15:39 |
| 8                           | 04:36<br>22:02                | 05:28 19:41-20:17/36<br>21:11 | 06:30 17:28-18:06/38<br>19:54               | 07:30<br>18:34                               | 07:36<br>16:20 | 08:33<br>15:39 |
| 9                           | 04:37<br>22:01                | 05:30 19:41-20:16/35<br>21:09 | 06:32 17:27-18:07/40<br>19:51               | 07:32<br>18:31                               | 07:38<br>16:18 | 08:34<br>15:38 |
| 10                          | 04:38<br>22:00                | 05:32 19:41-20:16/35<br>21:06 | 06:34 17:25-18:07/42<br>19:48               | 07:34<br>18:28                               | 07:40<br>16:16 | 08:36<br>15:38 |
| 11                          | 04:40<br>21:59                | 05:34 19:41-20:15/34<br>21:04 | 06:36 17:23-18:07/44<br>19:46               | 07:36<br>18:26                               | 07:42<br>16:14 | 08:37<br>15:38 |
| 12                          | 04:41<br>21:58                | 05:36 19:42-20:15/33<br>21:02 | 06:38 17:22-18:08/46<br>19:43               | 07:38<br>18:23                               | 07:44<br>16:12 | 08:38<br>15:37 |
| 13                          | 04:42<br>21:57                | 05:38 19:43-20:14/31<br>20:59 | 06:40 17:21-18:08/47<br>19:40               | 07:40<br>18:21                               | 07:46<br>16:10 | 08:39<br>15:37 |
| 14                          | 04:44<br>21:56                | 05:40 19:44-20:13/29<br>20:57 | 06:42 17:20-18:08/48<br>19:38               | 07:42<br>18:18                               | 07:49<br>16:08 | 08:40<br>15:37 |
| 15                          | 04:45<br>21:54                | 05:42 19:44-20:11/27<br>20:55 | 06:44 17:19-18:08/49<br>19:35               | 07:44<br>18:16                               | 07:51<br>16:06 | 08:41<br>15:37 |
| 16                          | 04:47<br>21:53                | 05:44 19:45-20:09/24<br>20:52 | 06:46 17:18-18:08/50<br>19:32               | 07:46<br>18:13                               | 07:53<br>16:05 | 08:42<br>15:37 |
| 17                          | 04:48 19:56-20:02/6<br>21:52  | 05:46 19:46-20:08/22<br>20:50 | 06:48 17:18-18:08/50<br>19:30               | 07:48<br>18:10                               | 07:55<br>16:03 | 08:43<br>15:37 |
| 18                          | 04:50 19:54-20:06/12<br>21:50 | 05:48 19:48-20:06/18<br>20:48 | 06:50 17:17-18:08/51<br>19:27               | 07:51<br>18:08                               | 07:57<br>16:01 | 08:44<br>15:37 |
| 19                          | 04:52 19:52-20:07/15<br>21:49 | 05:50 19:51-20:02/11<br>20:45 | 06:52 17:17-18:08/51<br>19:24               | 07:53<br>18:05                               | 07:59<br>16:00 | 08:45<br>15:37 |
| 20                          | 04:53 19:51-20:09/18<br>21:47 | 05:52 19:38-19:49/11<br>20:43 | 06:54 17:16-18:07/51<br>19:22               | 07:55<br>18:03                               | 08:01<br>15:58 | 08:45<br>15:38 |
| 21                          | 04:55 19:49-20:10/21<br>21:46 | 05:54 19:36-19:51/15<br>20:40 | 06:56 17:16-18:07/51<br>19:19               | 07:57<br>18:01                               | 08:03<br>15:57 | 08:46<br>15:38 |
| 22                          | 04:56 19:48-20:12/24<br>21:44 | 05:56 19:33-19:51/18<br>20:38 | 06:58 17:16-18:06/50<br>19:16               | 07:59<br>17:58                               | 08:05<br>15:55 | 08:47<br>15:39 |
| 23                          | 04:58 19:47-20:12/25<br>21:42 | 05:58 19:32-19:51/19<br>20:35 | 07:00 17:16-18:05/49<br>19:13               | 08:01<br>17:56                               | 08:07<br>15:54 | 08:47<br>15:39 |
| 24                          | 05:00 19:46-20:13/27<br>21:41 | 06:00 19:31-19:52/21<br>20:33 | 07:02 17:16-18:05/49<br>19:11               | 08:03<br>17:53                               | 08:09<br>15:52 | 08:48<br>15:40 |
| 25                          | 05:02 19:45-20:13/28<br>21:39 | 06:02 19:30-19:52/22<br>20:30 | 07:04 17:16-18:04/48<br>19:08               | 07:05<br>16:51                               | 08:11<br>15:51 | 08:48<br>15:40 |
| 26                          | 05:03 19:45-20:15/30<br>21:37 | 06:04 19:29-19:52/23<br>20:28 | 07:06 17:16-18:03/47<br>19:05               | 07:08<br>16:48                               | 08:13<br>15:50 | 08:48<br>15:41 |
| 27                          | 05:05 19:44-20:15/31<br>21:35 | 06:06 19:29-19:52/23<br>20:25 | 07:08 17:17-18:01/44<br>19:03               | 07:10<br>16:46                               | 08:15<br>15:48 | 08:48<br>15:42 |
| 28                          | 05:07 19:43-20:15/32<br>21:33 | 06:08 19:29-19:51/22<br>20:22 | 07:10 17:17-18:00/43<br>19:00               | 07:12<br>16:44                               | 08:17<br>15:47 | 08:49<br>15:43 |
| 29                          | 05:09 19:43-20:16/33<br>21:32 | 06:10 19:29-19:50/21<br>20:20 | 07:12 17:18-17:58/40<br>18:57               | 07:14<br>16:42                               | 08:18<br>15:46 | 08:49<br>15:44 |
| 30                          | 05:11 19:43-20:17/34<br>21:30 | 06:12 19:29-19:47/18<br>20:17 | 07:14 17:19-17:57/38<br>18:55               | 07:16<br>16:39                               | 08:20<br>15:45 | 08:49<br>15:45 |
| 31                          | 05:13 19:42-20:16/34<br>21:28 | 06:14 19:28-19:44/16<br>20:15 |   | 07:18<br>16:37                               |                | 08:49<br>15:46 |
| Potential sun hours         |                               | 528                           | 469   | 384  | 324            | 248            |
| Sum of minutes with flicker |                               | 370                           | 821   | 1348   | 138            | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: O3 - VESTAS V162-6.2 6200 162.0 !OI! hub: 166,0 m (TOT: 247,0 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<br>15:47                | 08:13 15:10-15:39/29<br>16:44 | 07:09 15:11-15:39/28<br>17:46 16:58-17:16/18 | 06:47 18:34-19:18/44<br>19:51 | 05:31<br>20:53 | 04:35<br>21:50 |
| 2                           | 08:48<br>15:48                | 08:11 15:09-15:40/31<br>16:46 | 07:06 15:13-15:36/23<br>17:48 16:57-17:16/19 | 06:45 18:33-19:17/44<br>19:53 | 05:29<br>20:55 | 04:34<br>21:52 |
| 3                           | 08:48<br>15:50                | 08:09 15:08-15:42/34<br>16:48 | 07:04 15:17-15:33/16<br>17:50 16:58-17:16/18 | 06:42 18:31-19:18/47<br>19:55 | 05:27<br>20:57 | 04:33<br>21:53 |
| 4                           | 08:47<br>15:51                | 08:07 15:07-15:44/37<br>16:51 | 07:01 16:58-17:15/17<br>17:53                | 06:39 18:30-19:17/47<br>19:57 | 05:24<br>20:59 | 04:32<br>21:54 |
| 5                           | 08:47<br>15:52                | 08:05 15:05-15:44/39<br>16:53 | 06:59 16:58-17:14/16<br>17:55                | 06:37 18:29-19:16/47<br>20:00 | 05:22<br>21:02 | 04:31<br>21:55 |
| 6                           | 08:46<br>15:54                | 08:03 15:05-15:45/40<br>16:55 | 06:56 16:59-17:13/14<br>17:57                | 06:34 18:28-19:15/47<br>20:02 | 05:20<br>21:04 | 04:30<br>21:57 |
| 7                           | 08:46<br>15:55                | 08:01 15:04-15:46/42<br>16:57 | 06:54 17:01-17:11/10<br>17:59                | 06:31 18:27-19:13/46<br>20:04 | 05:18<br>21:06 | 04:29<br>21:58 |
| 8                           | 08:45<br>15:57                | 07:58 15:04-15:48/44<br>17:00 | 06:51 17:05-17:06/1<br>18:01                 | 06:29 18:27-19:12/45<br>20:06 | 05:16<br>21:08 | 04:28<br>21:59 |
| 9                           | 08:44<br>15:58                | 07:56 15:03-15:48/45<br>17:02 | 06:48<br>18:03                               | 06:26 18:26-19:08/42<br>20:08 | 05:14<br>21:10 | 04:28<br>22:00 |
| 10                          | 08:44<br>16:00                | 07:54 15:03-15:48/45<br>17:04 | 06:46<br>18:05                               | 06:23 18:26-19:09/43<br>20:10 | 05:11<br>21:12 | 04:27<br>22:01 |
| 11                          | 08:43<br>16:02                | 07:52 15:02-15:48/46<br>17:06 | 06:43<br>18:07                               | 06:21 18:25-19:08/43<br>20:12 | 05:09<br>21:14 | 04:26<br>22:02 |
| 12                          | 08:42<br>16:04                | 07:50 15:02-15:49/47<br>17:09 | 06:40<br>18:10                               | 06:18 18:26-19:08/42<br>20:14 | 05:07<br>21:16 | 04:26<br>22:03 |
| 13                          | 08:41<br>16:05                | 07:48 15:02-15:50/48<br>17:11 | 06:38<br>18:12                               | 06:16 18:25-19:07/42<br>20:16 | 05:05<br>21:17 | 04:26<br>22:03 |
| 14                          | 08:40<br>16:07                | 07:45 15:01-15:50/49<br>17:13 | 06:35<br>18:14                               | 06:13 18:26-19:07/41<br>20:18 | 05:03<br>21:19 | 04:25<br>22:04 |
| 15                          | 08:39<br>16:09                | 07:43 15:01-15:50/49<br>17:15 | 06:33<br>18:16                               | 06:11 18:25-19:06/41<br>20:20 | 05:01<br>21:21 | 04:25<br>22:05 |
| 16                          | 08:38<br>16:11                | 07:41 15:01-15:50/49<br>17:17 | 06:30<br>18:18                               | 06:08 18:26-19:06/40<br>20:22 | 05:00<br>21:23 | 04:25<br>22:05 |
| 17                          | 08:37<br>16:13                | 07:38 15:01-15:50/49<br>17:20 | 06:27<br>18:20                               | 06:05 18:26-19:04/38<br>20:24 | 04:58<br>21:25 | 04:24<br>22:06 |
| 18                          | 08:35<br>16:15                | 07:36 15:01-15:49/48<br>17:22 | 06:25<br>18:22                               | 06:03 18:27-19:04/37<br>20:26 | 04:56<br>21:27 | 04:24<br>22:06 |
| 19                          | 08:34<br>16:17                | 07:34 15:02-15:50/48<br>17:24 | 06:22 17:51-17:56/5<br>18:24                 | 06:00 18:27-19:02/35<br>20:29 | 04:54<br>21:29 | 04:24<br>22:07 |
| 20                          | 08:33<br>16:19                | 07:31 15:01-15:49/48<br>17:26 | 06:19 17:49-17:58/9<br>18:26                 | 05:58 18:28-19:01/33<br>20:31 | 04:52<br>21:31 | 04:24<br>22:07 |
| 21                          | 08:31<br>16:21                | 07:29 15:02-15:49/47<br>17:29 | 06:17 17:47-18:00/13<br>18:28                | 05:55 18:30-19:00/30<br>20:33 | 04:51<br>21:32 | 04:25<br>22:07 |
| 22                          | 08:30<br>16:23                | 07:26 15:02-15:48/46<br>17:31 | 06:14 17:47-18:03/16<br>18:31                | 05:53 18:31-18:58/27<br>20:35 | 04:49<br>21:34 | 04:25<br>22:08 |
| 23                          | 08:28<br>16:25                | 07:24 15:04-15:48/44<br>17:33 | 06:11 17:46-18:04/18<br>18:33                | 05:50 18:33-18:57/24<br>20:37 | 04:47<br>21:36 | 04:25<br>22:08 |
| 24                          | 08:27<br>16:27                | 07:21 15:04-15:46/42<br>17:35 | 06:09 17:45-18:06/21<br>18:35                | 05:48 18:35-18:54/19<br>20:39 | 04:46<br>21:38 | 04:25<br>22:08 |
| 25                          | 08:25<br>16:29                | 07:19 15:05-15:46/41<br>17:37 | 06:06 17:45-18:09/24<br>18:37                | 05:46 18:38-18:50/12<br>20:41 | 04:44<br>21:39 | 04:26<br>22:08 |
| 26                          | 08:23<br>16:31                | 07:16 15:06-15:44/38<br>17:40 | 06:03 17:45-18:11/26<br>18:39                | 05:43<br>20:43                | 04:43<br>21:41 | 04:26<br>22:08 |
| 27                          | 08:22<br>16:33                | 07:14 15:07-15:42/35<br>17:42 | 06:01 17:45-18:12/27<br>18:41                | 05:41<br>20:45                | 04:41<br>21:43 | 04:27<br>22:08 |
| 28                          | 08:20 15:22-15:25/3<br>16:35  | 07:11 15:09-15:41/32<br>17:44 | 05:58 17:46-18:15/29<br>18:43                | 05:38<br>20:47                | 04:40<br>21:44 | 04:27<br>22:08 |
| 29                          | 08:18 15:16-15:31/15<br>16:37 |                               | 06:55 18:42-19:17/35<br>19:45                | 05:36<br>20:49                | 04:39<br>21:46 | 04:28<br>22:07 |
| 30                          | 08:16 15:13-15:34/21<br>16:40 |                               | 06:53 18:38-19:17/39<br>19:47                | 05:34<br>20:51                | 04:37<br>21:47 | 04:28<br>22:07 |
| 31                          | 08:15 15:11-15:36/25<br>16:42 |                               | 06:50 18:36-19:18/42<br>19:49                |                               | 04:36<br>21:49 |                |
| Potential sun hours         | 236                           | 266                           | 366  | 426                           | 507            | 528            |
| Sum of minutes with flicker | 64                            | 1236                          | 484  | 956                           | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: O3 - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 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<br>22:07 | 05:15<br>21:26 | 06:16<br>20:12 | 18:24-19:07/43<br>18:52 | 07:21<br>16:35                   | 14:32-15:18/46<br>15:44 |                         |
| 2                           | 04:30<br>22:06 | 05:16<br>21:24 | 06:18<br>20:10 | 18:24-19:07/43<br>18:49 | 07:23<br>16:33                   | 14:32-15:17/45<br>15:43 |                         |
| 3                           | 04:31<br>22:06 | 05:18<br>21:22 | 06:20<br>20:07 | 18:24-19:06/42<br>18:47 | 07:25<br>16:30                   | 14:34-15:17/43<br>15:42 |                         |
| 4                           | 04:32<br>22:05 | 05:20<br>21:19 | 06:22<br>20:04 | 18:24-19:09/45<br>18:44 | 07:27<br>16:28                   | 14:34-15:16/42<br>15:41 |                         |
| 5                           | 04:33<br>22:04 | 05:22<br>21:17 | 06:24<br>20:02 | 18:24-19:10/46<br>18:41 | 07:29<br>16:26                   | 14:34-15:15/41<br>15:41 |                         |
| 6                           | 04:34<br>22:04 | 05:24<br>21:15 | 06:26<br>19:59 | 18:24-19:11/47<br>18:39 | 07:31<br>16:24                   | 14:36-15:15/39<br>15:40 |                         |
| 7                           | 04:35<br>22:03 | 05:26<br>21:13 | 06:28<br>19:56 | 18:24-19:11/47<br>18:36 | 07:34<br>16:22                   | 14:37-15:13/36<br>15:39 |                         |
| 8                           | 04:36<br>22:02 | 05:28<br>21:11 | 06:30<br>19:54 | 18:25-19:12/47<br>18:34 | 07:36<br>16:20                   | 14:38-15:12/34<br>15:39 |                         |
| 9                           | 04:37<br>22:01 | 05:30<br>21:09 | 06:32<br>19:51 | 18:25-19:12/47<br>18:31 | 07:38<br>16:18                   | 14:40-15:11/31<br>15:38 |                         |
| 10                          | 04:39<br>22:00 | 05:32<br>21:06 | 06:34<br>19:48 | 18:26-19:11/45<br>18:28 | 15:55-16:04/9<br>17:32-17:50/18  | 07:40<br>16:16          | 14:41-15:09/28<br>15:38 |
| 11                          | 04:40<br>21:59 | 05:34<br>21:04 | 06:36<br>19:46 | 18:26-19:10/44<br>18:26 | 15:49-16:09/20<br>17:32-17:50/18 | 07:42<br>16:14          | 14:43-15:08/25<br>15:38 |
| 12                          | 04:41<br>21:58 | 05:36<br>21:02 | 06:38<br>19:43 | 18:28-19:10/42<br>18:23 | 15:46-16:11/25<br>17:31-17:50/19 | 07:44<br>16:12          | 14:45-15:06/21<br>15:37 |
| 13                          | 04:42<br>21:57 | 05:38<br>20:59 | 06:40<br>19:40 | 18:29-19:09/40<br>18:21 | 15:43-16:13/30<br>17:31-17:49/18 | 07:46<br>16:10          | 14:48-15:02/14<br>15:37 |
| 14                          | 04:44<br>21:55 | 05:40<br>20:57 | 06:42<br>19:38 | 18:32-19:07/35<br>18:18 | 15:40-16:14/34<br>17:31-17:46/15 | 07:49<br>16:08          | 15:37<br>15:37          |
| 15                          | 04:45<br>21:54 | 05:42<br>20:55 | 06:44<br>19:35 | 18:36-19:05/29<br>18:16 | 15:39-16:16/37<br>17:32-17:44/12 | 07:51<br>16:06          | 15:37<br>15:37          |
| 16                          | 04:47<br>21:53 | 05:44<br>20:52 | 06:46<br>19:32 | 18:35-19:02/27<br>18:13 | 15:38-16:17/39<br>17:33-17:41/8  | 07:53<br>16:05          | 15:37<br>15:37          |
| 17                          | 04:48<br>21:52 | 05:46<br>20:50 | 06:48<br>19:30 | 18:34-19:00/26<br>18:10 | 15:36-16:17/41<br>17:35-17:38/3  | 07:55<br>16:03          | 15:37<br>15:37          |
| 18                          | 04:50<br>21:50 | 05:48<br>20:48 | 06:50<br>19:27 | 18:33-18:57/24<br>18:08 | 15:35-16:18/43<br>18:08          | 07:57<br>16:01          | 15:37<br>15:37          |
| 19                          | 04:52<br>21:49 | 05:50<br>20:45 | 06:52<br>19:24 | 18:32-18:54/22<br>18:05 | 15:35-16:19/44<br>18:05          | 07:59<br>16:00          | 15:37<br>15:37          |
| 20                          | 04:53<br>21:47 | 05:52<br>20:43 | 06:54<br>19:21 | 18:32-18:52/20<br>18:03 | 15:33-16:19/46<br>18:03          | 08:01<br>15:58          | 15:37<br>15:38          |
| 21                          | 04:55<br>21:46 | 05:54<br>20:40 | 06:56<br>19:19 | 18:32-18:49/17<br>18:01 | 15:32-16:19/47<br>18:01          | 08:03<br>15:57          | 15:38<br>15:38          |
| 22                          | 04:56<br>21:44 | 05:56<br>20:38 | 06:58<br>19:16 | 18:32-18:46/14<br>17:58 | 15:32-16:19/47<br>17:58          | 08:05<br>15:55          | 15:38<br>15:39          |
| 23                          | 04:58<br>21:42 | 05:58<br>20:35 | 07:00<br>19:13 | 18:33-18:43/10<br>17:56 | 15:32-16:20/48<br>17:56          | 08:07<br>15:54          | 15:39<br>15:39          |
| 24                          | 05:00<br>21:41 | 06:00<br>20:33 | 07:02<br>19:11 | 18:34-18:41/7<br>17:53  | 15:31-16:20/49<br>17:53          | 08:09<br>15:52          | 15:40<br>15:40          |
| 25                          | 05:02<br>21:39 | 06:02<br>20:30 | 07:04<br>19:08 | 18:37-18:38/1<br>16:51  | 14:31-15:19/48<br>16:51          | 08:11<br>15:51          | 15:41<br>15:41          |
| 26                          | 05:03<br>21:37 | 06:04<br>20:28 | 07:06<br>19:05 | 18:37-18:38/1<br>16:48  | 14:31-15:20/49<br>16:48          | 08:13<br>15:50          | 15:42<br>15:41          |
| 27                          | 05:05<br>21:35 | 06:06<br>20:25 | 07:08<br>19:03 | 18:37-18:38/1<br>16:46  | 14:31-15:19/48<br>16:46          | 08:15<br>15:48          | 15:43<br>15:42          |
| 28                          | 05:07<br>21:33 | 06:08<br>20:22 | 07:10<br>19:00 | 18:37-18:38/1<br>16:44  | 14:30-15:19/49<br>16:44          | 08:17<br>15:47          | 15:44<br>15:43          |
| 29                          | 05:09<br>21:32 | 06:10<br>20:20 | 07:12<br>18:57 | 18:37-18:38/1<br>16:42  | 14:31-15:19/48<br>16:42          | 08:18<br>15:46          | 15:45<br>15:44          |
| 30                          | 05:11<br>21:30 | 06:12<br>20:17 | 07:14<br>18:55 | 18:37-18:38/1<br>16:39  | 14:31-15:19/48<br>16:39          | 08:20<br>15:45          | 15:46<br>15:45          |
| 31                          | 05:13<br>21:28 | 06:14<br>20:15 | 18:24-19:07/43 | 18:37-18:38/1<br>16:37  | 14:31-15:18/47<br>16:37          | 08:21<br>15:44          | 15:46<br>15:46          |
| Potential sun hours         | 528            | 469            | 384            | 324                     | 248                              | 217                     |                         |
| Sum of minutes with flicker | 0              | 470            | 810            | 1060                    | 445                              | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: O4 - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 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<br>15:47                | 08:13 15:15-15:44/29<br>16:44 | 07:09 16:55-17:14/19<br>17:46 | 06:47<br>19:51 | 05:31<br>20:53 | 04:35<br>21:50 |
| 2                           | 08:48<br>15:49                | 08:11 15:16-15:44/28<br>16:46 | 07:06 16:53-17:15/22<br>17:48 | 06:45<br>19:53 | 05:29<br>20:55 | 04:34<br>21:52 |
| 3                           | 08:48<br>15:50                | 08:09 15:16-15:44/28<br>16:49 | 07:04 16:53-17:16/23<br>17:50 | 06:42<br>19:55 | 05:27<br>20:57 | 04:33<br>21:53 |
| 4                           | 08:47<br>15:51                | 08:07 15:17-15:44/27<br>16:51 | 07:01 16:51-17:17/26<br>17:53 | 06:39<br>19:57 | 05:25<br>20:59 | 04:32<br>21:54 |
| 5                           | 08:47<br>15:52                | 08:05 15:17-15:43/26<br>16:53 | 06:59 16:50-17:17/27<br>17:55 | 06:37<br>20:00 | 05:22<br>21:02 | 04:31<br>21:55 |
| 6                           | 08:46<br>15:54                | 08:03 15:18-15:42/24<br>16:55 | 06:56 16:50-17:18/28<br>17:57 | 06:34<br>20:02 | 05:20<br>21:04 | 04:30<br>21:57 |
| 7                           | 08:46<br>15:55                | 08:01 15:20-15:42/22<br>16:57 | 06:54 16:49-17:17/28<br>17:59 | 06:31<br>20:04 | 05:18<br>21:06 | 04:29<br>21:58 |
| 8                           | 08:45<br>15:57                | 07:59 15:21-15:41/20<br>17:00 | 06:51 16:50-17:18/28<br>18:01 | 06:29<br>20:06 | 05:16<br>21:08 | 04:28<br>21:59 |
| 9                           | 08:44<br>15:59                | 07:56 15:22-15:39/17<br>17:02 | 06:48 16:49-17:17/28<br>18:03 | 06:26<br>20:08 | 05:14<br>21:10 | 04:28<br>22:00 |
| 10                          | 08:44<br>16:00                | 07:54 15:25-15:37/12<br>17:04 | 06:46 16:49-17:16/27<br>18:05 | 06:24<br>20:10 | 05:12<br>21:12 | 04:27<br>22:01 |
| 11                          | 08:43<br>16:02                | 07:52<br>17:06                | 06:43 16:49-17:15/26<br>18:08 | 06:21<br>20:12 | 05:09<br>21:14 | 04:27<br>22:02 |
| 12                          | 08:42<br>16:04                | 07:50<br>17:09                | 06:40 16:51-17:15/24<br>18:10 | 06:18<br>20:14 | 05:07<br>21:16 | 04:26<br>22:03 |
| 13                          | 08:41<br>16:05                | 07:48<br>17:11                | 06:38 16:51-17:13/22<br>18:12 | 06:16<br>20:16 | 05:05<br>21:17 | 04:26<br>22:03 |
| 14                          | 08:40<br>16:07                | 07:45<br>17:13                | 06:35 16:52-17:11/19<br>18:14 | 06:13<br>20:18 | 05:03<br>21:19 | 04:25<br>22:04 |
| 15                          | 08:39<br>16:09                | 07:43<br>17:15                | 06:33 16:54-17:09/15<br>18:16 | 06:11<br>20:20 | 05:02<br>21:21 | 04:25<br>22:05 |
| 16                          | 08:38<br>16:11                | 07:41<br>17:18                | 06:30 16:57-17:06/9<br>18:18  | 06:08<br>20:22 | 05:00<br>21:23 | 04:25<br>22:05 |
| 17                          | 08:37 15:22-15:30/8<br>16:13  | 07:38<br>17:20                | 06:27<br>18:20                | 06:05<br>20:24 | 04:58<br>21:25 | 04:25<br>22:06 |
| 18                          | 08:35 15:20-15:33/13<br>16:15 | 07:36<br>17:22                | 06:25<br>18:22                | 06:03<br>20:26 | 04:56<br>21:27 | 04:24<br>22:06 |
| 19                          | 08:34 15:19-15:34/15<br>16:17 | 07:34<br>17:24                | 06:22<br>18:24                | 06:00<br>20:29 | 04:54<br>21:29 | 04:24<br>22:07 |
| 20                          | 08:33 15:17-15:36/19<br>16:19 | 07:31<br>17:26                | 06:19<br>18:26                | 05:58<br>20:31 | 04:52<br>21:31 | 04:24<br>22:07 |
| 21                          | 08:31 15:17-15:38/21<br>16:21 | 07:29<br>17:29                | 06:17<br>18:28                | 05:55<br>20:33 | 04:51<br>21:32 | 04:25<br>22:07 |
| 22                          | 08:30 15:16-15:39/23<br>16:23 | 07:26<br>17:31                | 06:14<br>18:31                | 05:53<br>20:35 | 04:49<br>21:34 | 04:25<br>22:08 |
| 23                          | 08:28 15:16-15:39/23<br>16:25 | 07:24<br>17:33                | 06:11<br>18:33                | 05:50<br>20:37 | 04:47<br>21:36 | 04:25<br>22:08 |
| 24                          | 08:27 15:15-15:40/25<br>16:27 | 07:21<br>17:35                | 06:09<br>18:35                | 05:48<br>20:39 | 04:46<br>21:38 | 04:25<br>22:08 |
| 25                          | 08:25 15:15-15:41/26<br>16:29 | 07:19<br>17:37                | 06:06<br>18:37                | 05:46<br>20:41 | 04:44<br>21:39 | 04:26<br>22:08 |
| 26                          | 08:23 15:15-15:41/26<br>16:31 | 07:17<br>17:40                | 06:03<br>18:39                | 05:43<br>20:43 | 04:43<br>21:41 | 04:26<br>22:08 |
| 27                          | 08:22 15:14-15:42/28<br>16:33 | 07:14 17:01-17:09/8<br>17:42  | 06:01<br>18:41                | 05:41<br>20:45 | 04:41<br>21:43 | 04:27<br>22:08 |
| 28                          | 08:20 15:14-15:42/28<br>16:35 | 07:11 16:58-17:12/14<br>17:44 | 05:58<br>18:43                | 05:38<br>20:47 | 04:40<br>21:44 | 04:27<br>22:08 |
| 29                          | 08:18 15:14-15:43/29<br>16:38 |                               | 06:55<br>19:45                | 05:36<br>20:49 | 04:39<br>21:46 | 04:28<br>22:07 |
| 30                          | 08:16 15:15-15:43/28<br>16:40 |                               | 06:53<br>19:47                | 05:34<br>20:51 | 04:37<br>21:47 | 04:28<br>22:07 |
| 31                          | 08:15 15:15-15:43/28<br>16:42 |                               | 06:50<br>19:49                |                | 04:36<br>21:49 |                |
| Potential sun hours         | 236                           | 266                           | 366                           | 426            | 507            | 528            |
| Sum of minutes with flicker | 340                           | 255                           | 371                           | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: O4 - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 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<br>22:07 | 05:15<br>21:26 | 06:16<br>20:12                | 07:16 17:30-17:53/23<br>18:52 | 07:21 14:54-15:07/13<br>16:35 | 08:22<br>15:44 |
| 2                           | 04:30<br>22:06 | 05:17<br>21:24 | 06:18<br>20:10                | 07:18 17:29-17:54/25<br>18:49 | 07:23 14:52-15:08/16<br>16:33 | 08:24<br>15:43 |
| 3                           | 04:31<br>22:06 | 05:18<br>21:22 | 06:20<br>20:07                | 07:20 17:28-17:54/26<br>18:47 | 07:25 14:51-15:11/20<br>16:30 | 08:25<br>15:42 |
| 4                           | 04:32<br>22:05 | 05:20<br>21:19 | 06:22<br>20:04                | 07:22 17:27-17:54/27<br>18:44 | 07:27 14:49-15:11/22<br>16:28 | 08:27<br>15:41 |
| 5                           | 04:33<br>22:04 | 05:22<br>21:17 | 06:24<br>20:02                | 07:24 17:26-17:54/28<br>18:41 | 07:29 14:48-15:12/24<br>16:26 | 08:28<br>15:41 |
| 6                           | 04:34<br>22:04 | 05:24<br>21:15 | 06:26<br>19:59                | 07:26 17:26-17:53/27<br>18:39 | 07:31 14:48-15:13/25<br>16:24 | 08:30<br>15:40 |
| 7                           | 04:35<br>22:03 | 05:26<br>21:13 | 06:28<br>19:56                | 07:28 17:25-17:53/28<br>18:36 | 07:34 14:47-15:14/27<br>16:22 | 08:31<br>15:39 |
| 8                           | 04:36<br>22:02 | 05:28<br>21:11 | 06:30<br>19:54                | 07:30 17:26-17:53/27<br>18:34 | 07:36 14:46-15:14/28<br>16:20 | 08:33<br>15:39 |
| 9                           | 04:37<br>22:01 | 05:30<br>21:09 | 06:32<br>19:51                | 07:32 17:26-17:52/26<br>18:31 | 07:38 14:46-15:15/29<br>16:18 | 08:34<br>15:38 |
| 10                          | 04:39<br>22:00 | 05:32<br>21:06 | 06:34<br>19:48                | 07:34 17:27-17:51/24<br>18:28 | 07:40 14:46-15:15/29<br>16:16 | 08:36<br>15:38 |
| 11                          | 04:40<br>21:59 | 05:34<br>21:04 | 06:36<br>19:46                | 07:36 17:27-17:50/23<br>18:26 | 07:42 14:47-15:15/28<br>16:14 | 08:37<br>15:38 |
| 12                          | 04:41<br>21:58 | 05:36<br>21:02 | 06:38<br>19:43                | 07:38 17:28-17:48/20<br>18:23 | 07:44 14:46-15:15/29<br>16:12 | 08:38<br>15:37 |
| 13                          | 04:43<br>21:57 | 05:38<br>20:59 | 06:40<br>19:40                | 07:40 17:29-17:46/17<br>18:21 | 07:46 14:46-15:15/29<br>16:10 | 08:39<br>15:37 |
| 14                          | 04:44<br>21:55 | 05:40<br>20:57 | 06:42<br>19:38                | 07:42 17:31-17:43/12<br>18:18 | 07:49 14:47-15:15/28<br>16:08 | 08:40<br>15:37 |
| 15                          | 04:45<br>21:54 | 05:42<br>20:55 | 06:44<br>19:35                | 07:44<br>18:16                | 07:51 14:47-15:15/28<br>16:06 | 08:41<br>15:37 |
| 16                          | 04:47<br>21:53 | 05:44<br>20:52 | 06:46<br>19:32                | 07:46<br>18:13                | 07:53 14:48-15:14/26<br>16:05 | 08:42<br>15:37 |
| 17                          | 04:48<br>21:52 | 05:46<br>20:50 | 06:48<br>19:30                | 07:48<br>18:10                | 07:55 14:49-15:15/26<br>16:03 | 08:43<br>15:37 |
| 18                          | 04:50<br>21:50 | 05:48<br>20:48 | 06:50<br>19:27                | 07:51<br>18:08                | 07:57 14:49-15:14/25<br>16:01 | 08:44<br>15:37 |
| 19                          | 04:52<br>21:49 | 05:50<br>20:45 | 06:52<br>19:24                | 07:53<br>18:05                | 07:59 14:50-15:13/23<br>16:00 | 08:45<br>15:37 |
| 20                          | 04:53<br>21:47 | 05:52<br>20:43 | 06:54<br>19:22                | 07:55<br>18:03                | 08:01 14:51-15:14/23<br>15:58 | 08:45<br>15:38 |
| 21                          | 04:55<br>21:46 | 05:54<br>20:40 | 06:56<br>19:19                | 07:57<br>18:01                | 08:03 14:52-15:13/21<br>15:57 | 08:46<br>15:38 |
| 22                          | 04:57<br>21:44 | 05:56<br>20:38 | 06:58<br>19:16                | 07:59<br>17:58                | 08:05 14:53-15:12/19<br>15:55 | 08:47<br>15:39 |
| 23                          | 04:58<br>21:42 | 05:58<br>20:35 | 07:00<br>19:13                | 08:01<br>17:56                | 08:07 14:56-15:11/15<br>15:54 | 08:47<br>15:39 |
| 24                          | 05:00<br>21:41 | 06:00<br>20:33 | 07:02<br>19:11                | 08:03<br>17:53                | 08:09 14:57-15:10/13<br>15:52 | 08:48<br>15:40 |
| 25                          | 05:02<br>21:39 | 06:02<br>20:30 | 07:04<br>19:08                | 07:05<br>16:51                | 08:11 14:59-15:08/9<br>15:51  | 08:48<br>15:40 |
| 26                          | 05:04<br>21:37 | 06:04<br>20:28 | 07:06<br>19:05                | 07:08<br>16:49                | 08:13<br>15:50                | 08:48<br>15:41 |
| 27                          | 05:05<br>21:35 | 06:06<br>20:25 | 07:08 17:42-17:45/3<br>19:03  | 07:10<br>16:46                | 08:15<br>15:48                | 08:48<br>15:42 |
| 28                          | 05:07<br>21:33 | 06:08<br>20:22 | 07:10 17:36-17:49/13<br>19:00 | 07:12<br>16:44                | 08:17<br>15:47                | 08:49<br>15:43 |
| 29                          | 05:09<br>21:32 | 06:10<br>20:20 | 07:12 17:34-17:51/17<br>18:57 | 07:14<br>16:42                | 08:18<br>15:46                | 08:49<br>15:44 |
| 30                          | 05:11<br>21:30 | 06:12<br>20:17 | 07:14 17:32-17:52/20<br>18:55 | 07:16<br>16:39                | 08:20<br>15:45                | 08:49<br>15:45 |
| 31                          | 05:13<br>21:28 | 06:14<br>20:15 |                               | 07:18 14:59-15:01/2<br>16:37  |                               | 08:49<br>15:46 |
| Potential sun hours         | 528            | 469            | 384                           | 324                           | 248                           | 217            |
| Sum of minutes with flicker | 0              | 0              | 53                            | 335                           | 575                           | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: O5 - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 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 14:46-14:50/4<br>15:47  | 08:13 14:43-15:14/31<br>16:44 | 07:09 17:46<br>19:51 | 06:47 20:53<br>21:50 | 05:31 22:06<br>21:26 | 04:35 22:06<br>20:12 | 04:29 22:06<br>20:12 | 05:15 22:06<br>20:12 | 06:16 22:06<br>20:12 | 07:16 22:06<br>20:12 | 07:21 22:06<br>20:12 | 08:22 22:06<br>20:12 |
| 2                           | 08:48 14:45-14:53/8<br>15:48  | 08:11 14:44-15:14/30<br>16:46 | 07:06 17:48<br>19:53 | 06:45 20:55<br>21:51 | 05:29 22:06<br>21:26 | 04:34 22:06<br>20:12 | 04:30 22:06<br>20:12 | 05:17 22:06<br>20:12 | 06:18 22:06<br>20:12 | 07:18 22:06<br>20:12 | 07:23 22:06<br>20:12 | 08:24 22:06<br>20:12 |
| 3                           | 08:48 14:43-14:54/11<br>15:50 | 08:09 14:45-15:13/28<br>16:48 | 07:04 17:50<br>19:55 | 06:42 20:57<br>21:53 | 05:27 22:05<br>21:22 | 04:33 22:05<br>20:12 | 04:31 22:05<br>20:12 | 05:18 22:05<br>20:12 | 06:20 22:05<br>20:12 | 07:20 22:05<br>20:12 | 07:25 22:05<br>20:12 | 08:25 22:05<br>20:12 |
| 4                           | 08:47 14:43-14:56/13<br>15:51 | 08:07 14:47-15:13/26<br>16:51 | 07:01 17:53<br>19:57 | 06:39 20:54<br>21:54 | 05:24 22:05<br>21:22 | 04:32 22:05<br>20:12 | 04:32 22:05<br>20:12 | 05:20 22:05<br>20:12 | 06:22 22:05<br>20:12 | 07:22 22:05<br>20:12 | 07:27 22:05<br>20:12 | 08:27 22:05<br>20:12 |
| 5                           | 08:47 14:42-14:58/16<br>15:52 | 08:05 14:47-15:11/24<br>16:53 | 06:59 17:55<br>19:59 | 06:37 20:52<br>21:55 | 05:22 22:04<br>21:22 | 04:31 22:04<br>20:12 | 04:33 22:04<br>20:12 | 05:22 22:04<br>20:12 | 06:24 22:04<br>20:12 | 07:24 22:04<br>20:12 | 07:29 22:04<br>20:12 | 08:28 22:04<br>20:12 |
| 6                           | 08:46 14:42-14:59/17<br>15:54 | 08:03 14:49-15:10/21<br>16:55 | 06:56 17:57<br>19:59 | 06:34 20:50<br>21:57 | 05:20 22:03<br>21:23 | 04:30 22:03<br>20:12 | 04:34 22:03<br>20:12 | 05:24 22:03<br>20:12 | 06:26 22:03<br>20:12 | 07:26 22:03<br>20:12 | 07:31 22:03<br>20:12 | 08:30 22:03<br>20:12 |
| 7                           | 08:46 14:41-15:00/19<br>15:55 | 08:01 14:52-15:08/16<br>16:57 | 06:54 17:59<br>19:59 | 06:31 20:46<br>21:58 | 05:18 22:03<br>21:23 | 04:29 22:03<br>20:12 | 04:35 22:03<br>20:12 | 05:26 22:03<br>20:12 | 06:28 22:03<br>20:12 | 07:28 22:03<br>20:12 | 07:34 22:03<br>20:12 | 08:31 22:03<br>20:12 |
| 8                           | 08:45 14:40-15:01/21<br>15:57 | 07:58 14:55-15:04/9<br>17:00  | 06:51 18:01<br>19:59 | 06:29 20:51<br>21:59 | 05:16 22:02<br>21:22 | 04:28 22:02<br>20:12 | 04:36 22:02<br>20:12 | 05:28 22:02<br>20:12 | 06:30 22:02<br>20:12 | 07:30 22:02<br>20:12 | 07:36 22:02<br>20:12 | 08:33 22:02<br>20:12 |
| 9                           | 08:44 14:40-15:02/22<br>15:59 | 07:56 16:28-16:29/1<br>17:02  | 06:48 18:03<br>19:59 | 06:26 20:54<br>21:10 | 05:14 22:01<br>21:22 | 04:28 22:01<br>20:12 | 04:37 22:01<br>20:12 | 05:30 22:01<br>20:12 | 06:32 22:01<br>20:12 | 07:32 22:01<br>20:12 | 07:38 22:01<br>20:12 | 08:34 22:01<br>20:12 |
| 10                          | 08:44 14:40-15:04/24<br>16:00 | 07:54 16:24-16:32/8<br>17:04  | 06:46 18:05<br>19:59 | 06:23 20:52<br>21:12 | 05:12 22:01<br>21:22 | 04:27 22:01<br>20:12 | 04:39 22:01<br>20:12 | 05:32 22:01<br>20:12 | 06:34 22:01<br>20:12 | 07:34 22:01<br>20:12 | 07:40 22:01<br>20:12 | 08:35 22:01<br>20:12 |
| 11                          | 08:43 14:40-15:05/25<br>16:02 | 07:52 16:21-16:34/13<br>17:06 | 06:43 18:07<br>19:59 | 06:21 20:51<br>21:14 | 05:09 22:02<br>21:22 | 04:27 22:02<br>20:12 | 04:40 22:02<br>20:12 | 05:34 22:02<br>20:12 | 06:36 22:02<br>20:12 | 07:36 22:02<br>20:12 | 07:42 22:02<br>20:12 | 08:37 22:02<br>20:12 |
| 12                          | 08:42 14:40-15:06/26<br>16:04 | 07:50 16:20-16:37/17<br>17:09 | 06:40 18:10<br>19:59 | 06:18 20:50<br>21:15 | 05:07 22:03<br>21:22 | 04:26 22:03<br>20:12 | 04:41 22:03<br>20:12 | 05:36 22:03<br>20:12 | 06:38 22:03<br>20:12 | 07:38 22:03<br>20:12 | 07:44 22:03<br>20:12 | 08:38 22:03<br>20:12 |
| 13                          | 08:41 14:40-15:07/27<br>16:05 | 07:47 16:20-16:39/19<br>17:11 | 06:38 18:12<br>19:59 | 06:16 20:50<br>21:17 | 05:05 22:03<br>21:22 | 04:26 22:03<br>20:12 | 04:43 22:03<br>20:12 | 05:38 22:03<br>20:12 | 06:40 22:03<br>20:12 | 07:40 22:03<br>20:12 | 07:46 22:03<br>20:12 | 08:39 22:03<br>20:12 |
| 14                          | 08:40 14:39-15:08/29<br>16:07 | 07:45 16:19-16:41/22<br>17:13 | 06:35 18:14<br>19:59 | 06:13 20:50<br>21:19 | 05:03 22:04<br>21:22 | 04:25 22:04<br>20:12 | 04:44 22:04<br>20:12 | 05:40 22:04<br>20:12 | 06:42 22:04<br>20:12 | 07:42 22:04<br>20:12 | 07:49 22:04<br>20:12 | 08:40 22:04<br>20:12 |
| 15                          | 08:39 14:39-15:09/30<br>16:09 | 07:43 16:19-16:44/25<br>17:15 | 06:33 18:16<br>19:59 | 06:11 20:50<br>21:21 | 05:02 22:05<br>21:22 | 04:25 22:05<br>20:12 | 04:45 22:05<br>20:12 | 05:42 22:05<br>20:12 | 06:44 22:05<br>20:12 | 07:44 22:05<br>20:12 | 07:51 22:05<br>20:12 | 08:41 22:05<br>20:12 |
| 16                          | 08:38 14:40-15:10/30<br>16:11 | 07:41 16:18-16:46/28<br>17:18 | 06:30 18:18<br>19:59 | 06:08 20:50<br>21:23 | 05:00 22:05<br>21:22 | 04:25 22:05<br>20:12 | 04:47 22:05<br>20:12 | 05:44 22:05<br>20:12 | 06:46 22:05<br>20:12 | 07:46 22:05<br>20:12 | 07:53 22:05<br>20:12 | 08:42 22:05<br>20:12 |
| 17                          | 08:36 14:39-15:10/31<br>16:13 | 07:38 16:18-16:49/31<br>17:20 | 06:27 18:20<br>19:59 | 06:05 20:54<br>21:25 | 04:58 22:06<br>21:22 | 04:25 22:06<br>20:12 | 04:48 22:06<br>20:12 | 05:46 22:06<br>20:12 | 06:48 22:06<br>20:12 | 07:48 22:06<br>20:12 | 07:55 22:06<br>20:12 | 08:43 22:06<br>20:12 |
| 18                          | 08:35 14:38-15:11/33<br>16:15 | 07:36 16:18-16:51/33<br>17:22 | 06:25 18:22<br>19:59 | 06:03 20:54<br>21:27 | 04:56 22:06<br>21:22 | 04:24 22:06<br>20:12 | 04:50 22:06<br>20:12 | 05:48 22:06<br>20:12 | 06:50 22:06<br>20:12 | 07:50 22:06<br>20:12 | 07:57 22:06<br>20:12 | 08:44 22:06<br>20:12 |
| 19                          | 08:34 14:39-15:12/33<br>16:17 | 07:34 16:18-16:52/34<br>17:24 | 06:22 18:24<br>19:59 | 06:00 20:54<br>21:29 | 04:54 22:07<br>21:22 | 04:24 22:07<br>20:12 | 04:52 22:07<br>20:12 | 05:50 22:07<br>20:12 | 06:52 22:07<br>20:12 | 07:52 22:07<br>20:12 | 07:59 22:07<br>20:12 | 08:45 22:07<br>20:12 |
| 20                          | 08:33 14:39-15:12/33<br>16:19 | 07:31 16:18-16:52/34<br>17:26 | 06:19 18:26<br>19:59 | 05:58 20:58<br>21:31 | 04:52 22:07<br>21:22 | 04:24 22:07<br>20:12 | 04:53 22:07<br>20:12 | 05:52 22:07<br>20:12 | 06:54 22:07<br>20:12 | 07:54 22:07<br>20:12 | 08:01 22:07<br>20:12 | 08:45 22:07<br>20:12 |
| 21                          | 08:31 14:39-15:13/34<br>16:21 | 07:29 16:20-16:52/32<br>17:29 | 06:17 18:28<br>19:59 | 05:55 20:58<br>21:32 | 04:51 22:07<br>21:22 | 04:25 22:07<br>20:12 | 04:55 22:07<br>20:12 | 05:54 22:07<br>20:12 | 06:56 22:07<br>20:12 | 07:56 22:07<br>20:12 | 08:03 22:07<br>20:12 | 08:46 22:07<br>20:12 |
| 22                          | 08:30 14:39-15:14/35<br>16:23 | 07:26 16:20-16:52/32<br>17:31 | 06:14 18:31<br>19:59 | 05:53 20:59<br>21:34 | 04:49 22:08<br>21:22 | 04:25 22:08<br>20:12 | 04:57 22:08<br>20:12 | 05:56 22:08<br>20:12 | 06:58 22:08<br>20:12 | 07:59 22:08<br>20:12 | 08:05 22:08<br>20:12 | 08:47 22:08<br>20:12 |
| 23                          | 08:28 14:39-15:14/35<br>16:25 | 07:24 16:22-16:52/30<br>17:33 | 06:11 18:33<br>19:59 | 05:50 20:57<br>21:36 | 04:47 22:08<br>21:22 | 04:25 22:08<br>20:12 | 04:58 22:08<br>20:12 | 05:58 22:08<br>20:12 | 07:00 22:08<br>20:12 | 08:01 22:08<br>20:12 | 08:07 22:08<br>20:12 | 08:47 22:08<br>20:12 |
| 24                          | 08:27 14:39-15:14/35<br>16:27 | 07:21 16:24-16:50/26<br>17:35 | 06:09 18:35<br>19:59 | 05:48 20:58<br>21:38 | 04:46 22:08<br>21:22 | 04:25 22:08<br>20:12 | 05:00 22:08<br>20:12 | 06:00 22:08<br>20:12 | 07:02 22:08<br>20:12 | 08:03 22:08<br>20:12 | 08:09 22:08<br>20:12 | 08:48 22:08<br>20:12 |
| 25                          | 08:25 14:39-15:14/35<br>16:29 | 07:19 16:35-16:48/13<br>17:37 | 06:06 18:37<br>19:59 | 05:46 20:58<br>21:41 | 04:44 22:08<br>21:22 | 04:26 22:08<br>20:12 | 05:02 22:08<br>20:12 | 06:02 22:08<br>20:12 | 07:04 22:08<br>20:12 | 08:05 22:08<br>20:12 | 08:11 22:08<br>20:12 | 08:48 22:08<br>20:12 |
| 26                          | 08:23 14:40-15:14/34<br>16:31 | 07:16 16:37-16:47/10<br>17:40 | 06:03 18:39<br>19:59 | 05:43 20:58<br>21:41 | 04:43 22:08<br>21:22 | 04:26 22:08<br>20:12 | 05:04 22:08<br>20:12 | 06:04 22:08<br>20:12 | 07:06 22:08<br>20:12 | 08:07 22:08<br>20:12 | 08:13 22:08<br>20:12 | 08:48 22:08<br>20:12 |
| 27                          | 08:22 14:40-15:14/34<br>16:33 | 07:14 17:42<br>18:41          | 06:01 18:41<br>19:59 | 05:41 20:45<br>21:43 | 04:41 22:08<br>21:22 | 04:27 22:08<br>20:12 | 05:05 22:08<br>20:12 | 06:06 22:08<br>20:12 | 07:08 22:08<br>20:12 | 08:09 22:08<br>20:12 | 08:15 22:08<br>20:12 | 08:48 22:08<br>20:12 |
| 28                          | 08:20 14:40-15:15/35<br>16:35 | 07:11 17:44<br>18:43          | 05:58 18:43<br>19:59 | 05:38 20:47<br>21:44 | 04:40 22:07<br>21:22 | 04:27 22:07<br>20:12 | 05:07 22:07<br>20:12 | 06:08 22:07<br>20:12 | 07:10 22:07<br>20:12 | 08:11 22:07<br>20:12 | 08:17 22:07<br>20:12 | 08:48 22:07<br>20:12 |
| 29                          | 08:18 14:41-15:14/33<br>16:38 | 07:09 17:44<br>18:43          | 05:55 18:43<br>19:59 | 05:36 20:49<br>21:46 | 04:39 22:07<br>21:22 | 04:28 22:07<br>20:12 | 05:09 22:07<br>20:12 | 06:10 22:07<br>20:12 | 07:12 22:07<br>20:12 | 08:13 22:07<br>20:12 | 08:19 22:07<br>20:12 | 08:49 22:07<br>20:12 |
| 30                          | 08:16 14:41-15:14/33<br>16:40 | 07:07 17:44<br>18:43          | 05:53 18:43<br>19:59 | 05:34 20:51<br>21:47 | 04:37 22:07<br>21:22 | 04:28 22:07<br>20:12 | 05:11 22:07<br>20:12 | 06:12 22:07<br>20:12 | 07:14 22:07<br>20:12 | 08:15 22:07<br>20:12 | 08:21 22:07<br>20:12 | 08:49 22:07<br>20:12 |
| 31                          | 08:14 14:42-15:14/32<br>16:42 | 07:05 17:44<br>18:43          | 05:50 18:43<br>19:59 | 05:36 20:51<br>21:49 | 04:36 22:07<br>21:22 | 04:36 22:07<br>20:12 | 05:13 22:07<br>20:12 | 06:14 22:07<br>20:12 | 07:16 22:07<br>20:12 | 08:17 22:07<br>20:12 | 08:23 22:07<br>20:12 | 08:48 22:07<br>20:12 |
| Potential sun hours         | 236                           | 266                           | 366                  | 426                  | 507                  | 528                  | 528                  | 469                  | 384                  | 324                  | 248                  | 268                  |
| Sum of minutes with flicker | 827                           | 593                           | 0                    | 0                    | 0                    | 0                    | 0                    | 0                    | 0                    | 410                  | 840                  | 268                  |

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

|              |                  |                                 |                                |                      |
|--------------|------------------|---------------------------------|--------------------------------|----------------------|
| Day in month | Sun rise (hh:mm) | First time (hh:mm) with flicker | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: O6 - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 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 14:49-15:04/15<br>15:47 14:16-14:44/28                | 08:13 15:06-15:41/35<br>16:44                | 07:09 16:15-16:48/33<br>17:46 15:24-16:01/37 | 06:47 19:51 | 05:31 20:53 | 04:34 21:50 |
| 2                           | 08:48 14:48-15:05/17<br>15:48 14:16-14:44/28                | 08:11 15:06-15:42/36<br>16:46                | 07:06 16:15-16:47/32<br>17:48 15:25-16:00/35 | 06:44 19:53 | 05:28 20:55 | 04:33 21:52 |
| 3                           | 08:48 14:49-15:07/18<br>15:49 14:17-14:45/28                | 08:09 15:06-15:45/39<br>16:48                | 07:04 16:16-16:47/31<br>17:50 15:27-15:59/32 | 06:42 19:55 | 05:26 20:57 | 04:32 21:53 |
| 4                           | 08:48 14:49-15:07/18<br>15:50 14:16-14:45/29                | 08:07 15:06-15:51/45<br>16:50                | 07:01 16:16-16:46/30<br>17:52 15:29-15:56/27 | 06:39 19:57 | 05:24 21:00 | 04:31 21:54 |
| 5                           | 08:47 14:48-15:08/20<br>15:52 14:16-14:45/29                | 08:05 15:05-15:53/48<br>16:52                | 06:59 16:16-16:45/29<br>17:54 15:31-15:53/22 | 06:36 19:59 | 05:22 21:02 | 04:30 21:56 |
| 6                           | 08:47 14:49-15:09/20<br>15:53 14:18-14:47/29                | 08:03 15:05-15:56/51<br>16:55                | 06:56 16:18-16:44/26<br>17:57 15:35-15:50/15 | 06:34 20:01 | 05:19 21:04 | 04:29 21:57 |
| 7                           | 08:46 14:49-15:10/21<br>15:55 14:18-14:47/29                | 08:01 15:05-15:58/53<br>16:57                | 06:53 16:18-16:42/24<br>17:59                | 06:31 20:04 | 05:17 21:06 | 04:28 21:58 |
| 8                           | 08:45 14:49-15:10/21<br>15:56 14:18-14:48/30                | 07:58 15:05-16:00/55<br>16:59                | 06:51 17:27-17:32/5<br>18:01 16:20-16:40/20  | 06:28 20:06 | 05:15 21:08 | 04:28 21:59 |
| 9                           | 08:45 14:49-15:11/22<br>15:58 14:18-14:48/30                | 07:56 15:05-16:00/55<br>17:01                | 06:48 17:24-17:35/11<br>18:03 16:23-16:38/15 | 06:26 20:08 | 05:13 21:10 | 04:27 22:00 |
| 10                          | 08:44 14:50-15:12/22<br>15:59 14:19-14:49/30                | 07:54 15:05-16:02/57<br>17:04                | 06:46 17:22-17:37/15<br>18:05 16:27-16:32/5  | 06:23 20:10 | 05:11 21:12 | 04:26 22:01 |
| 11                          | 08:43 14:50-15:13/23<br>16:01 14:19-14:49/30                | 07:52 15:06-16:03/57<br>17:06                | 06:43 17:20-17:39/19<br>18:07                | 06:20 20:12 | 05:09 21:14 | 04:26 22:02 |
| 12                          | 08:42 14:50-15:12/22<br>16:03 14:19-14:49/30                | 07:50 15:05-16:04/59<br>17:08                | 06:40 17:19-17:40/21<br>18:09                | 06:18 20:14 | 05:07 21:16 | 04:25 22:03 |
| 13                          | 08:41 14:19-15:13/54<br>16:05                               | 07:47 15:06-16:05/59<br>17:10                | 06:38 17:16-17:40/24<br>18:11                | 06:15 20:16 | 05:05 21:18 | 04:25 22:04 |
| 14                          | 08:40 14:51-15:14/23<br>16:06 14:20-14:50/30                | 07:45 15:06-16:05/59<br>17:13                | 06:35 17:14-17:40/26<br>18:14                | 06:13 20:18 | 05:03 21:20 | 04:24 22:04 |
| 15                          | 08:39 14:20-15:14/54<br>16:08                               | 07:43 15:07-16:06/59<br>17:15                | 06:32 17:14-17:40/26<br>18:16                | 06:10 20:20 | 05:01 21:21 | 04:24 22:05 |
| 16                          | 08:38 14:21-15:14/53<br>16:10                               | 07:41 15:07-16:06/59<br>17:17                | 06:30 17:12-17:40/28<br>18:18                | 06:08 20:22 | 04:59 21:23 | 04:24 22:06 |
| 17                          | 08:37 14:21-15:14/53<br>16:12                               | 07:38 15:09-16:07/58<br>17:19 16:26-16:39/13 | 06:27 17:11-17:40/29<br>18:20                | 06:05 20:24 | 04:57 21:25 | 04:24 22:06 |
| 18                          | 08:35 14:52-15:15/23<br>16:14 14:22-14:51/29                | 07:36 15:09-16:06/57<br>17:22 16:23-16:41/18 | 06:24 17:10-17:40/30<br>18:22                | 06:02 20:26 | 04:55 21:27 | 04:24 22:07 |
| 19                          | 08:34 14:52-15:15/23<br>16:16 14:22-14:51/29                | 07:34 15:11-16:07/56<br>17:24 16:22-16:44/22 | 06:22 17:10-17:40/30<br>18:24                | 06:00 20:28 | 04:53 21:29 | 04:24 22:07 |
| 20                          | 08:33 14:53-15:14/21<br>16:18 14:23-14:52/29                | 07:31 15:12-16:06/54<br>17:26 16:20-16:45/25 | 06:19 17:10-17:40/30<br>18:26                | 05:57 20:31 | 04:52 21:31 | 04:24 22:07 |
| 21                          | 08:31 14:54-15:15/21<br>16:20 14:24-14:51/27                | 07:29 15:15-16:07/52<br>17:28 16:19-16:46/27 | 06:16 17:09-17:39/30<br>18:28                | 05:55 20:33 | 04:50 21:33 | 04:24 22:08 |
| 22                          | 08:30 14:55-15:14/19<br>16:22 14:24-14:51/27                | 07:26 15:17-16:06/49<br>17:30 16:17-16:47/30 | 06:14 17:10-17:39/29<br>18:30                | 05:52 20:35 | 04:48 21:34 | 04:24 22:08 |
| 23                          | 08:28 14:55-15:14/19 15:20-15:24/4<br>16:24 14:25-14:50/25  | 07:24 15:21-16:06/45<br>17:33 16:17-16:48/31 | 06:11 17:10-17:38/28<br>18:32                | 05:50 20:37 | 04:47 21:36 | 04:24 22:08 |
| 24                          | 08:27 14:57-15:13/16 15:15-15:29/14<br>16:26 14:26-14:50/24 | 07:21 16:16-16:48/32<br>17:35 15:21-16:05/44 | 06:08 17:10-17:37/27<br>18:34                | 05:48 20:39 | 04:45 21:38 | 04:24 22:08 |
| 25                          | 08:25 14:58-15:12/14 15:13-15:31/18<br>16:28 14:28-14:50/22 | 07:19 16:15-16:48/33<br>17:37 15:21-16:04/43 | 06:06 17:11-17:37/26<br>18:37                | 05:45 20:41 | 04:44 21:40 | 04:25 22:08 |
| 26                          | 08:23 15:01-15:34/33<br>16:30 14:30-14:49/19                | 07:16 16:15-16:48/33<br>17:39 15:22-16:04/42 | 06:03 17:11-17:35/24<br>18:39                | 05:43 20:43 | 04:42 21:41 | 04:25 22:08 |
| 27                          | 08:22 15:04-15:09/5 15:11-15:36/25<br>16:33 14:31-14:47/16  | 07:14 16:15-16:48/33<br>17:41 15:22-16:03/41 | 06:00 17:12-17:33/21<br>18:41                | 05:40 20:45 | 04:41 21:43 | 04:26 22:08 |
| 28                          | 08:20 14:34-14:45/11<br>16:35 15:10-15:38/28                | 07:11 16:15-16:49/34<br>17:44 15:24-16:03/39 | 05:58 17:15-17:31/16<br>18:43                | 05:38 20:47 | 04:39 21:44 | 04:26 22:08 |
| 29                          | 08:18 15:09-15:39/30<br>16:37                               |  | 06:55 18:17-18:28/11<br>19:45                | 05:35 20:49 | 04:38 21:46 | 04:27 22:08 |
| 30                          | 08:16 15:07-15:39/32<br>16:39                               |  | 06:52 19:47<br>19:49                         | 05:33 20:51 | 04:37 21:47 | 04:28 22:07 |
| 31                          | 08:15 15:07-15:40/33<br>16:41                               |  | 06:50<br>19:49                               |             | 04:35 21:49 |             |
| Potential sun hours         |   | 266  | 366  | 426         | 507         | 528         |
| Sum of minutes with flicker |   | 1492   | 1737   | 919         | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: O6 - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 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<br>22:07 | 05:14<br>21:26 | 06:15<br>20:12                | 07:15 17:57-18:20/23<br>18:52                | 07:21 14:35-15:31/56<br>16:34                               | 08:22 14:00-14:54/54<br>15:43                |
| 2                           | 04:29<br>22:06 | 05:16<br>21:24 | 06:17<br>20:09                | 07:17 17:59-18:18/19<br>18:49                | 07:23 14:34-15:30/56<br>16:32                               | 08:24 14:32-14:54/22<br>15:42 14:01-14:31/30 |
| 3                           | 04:30<br>22:06 | 05:18<br>21:22 | 06:19<br>20:07                | 07:19 17:59-18:16/17<br>18:46                | 07:25 14:35-15:29/54<br>16:30                               | 08:25 14:33-14:54/21<br>15:42 14:01-14:31/30 |
| 4                           | 04:31<br>22:05 | 05:20<br>21:20 | 06:21<br>20:04                | 07:21 18:00-18:13/13<br>18:44 17:02-17:13/11 | 07:27 14:35-15:27/52<br>16:28                               | 08:27 14:33-14:54/21<br>15:41 14:02-14:32/30 |
| 5                           | 04:32<br>22:04 | 05:22<br>21:17 | 06:23<br>20:01                | 07:23 18:02-18:10/8<br>18:41 16:58-17:16/18  | 07:29 14:35-15:25/50<br>16:26                               | 08:29 14:34-14:55/21<br>15:40 14:03-14:32/29 |
| 6                           | 04:33<br>22:04 | 05:24<br>21:15 | 06:25<br>19:59                | 07:26 16:55-17:17/22<br>18:38                | 07:31 14:35-15:24/49<br>16:23                               | 08:30 14:35-14:55/20<br>15:39 14:04-14:33/29 |
| 7                           | 04:34<br>22:03 | 05:26<br>21:13 | 06:27<br>19:56                | 07:28 16:53-17:19/26<br>18:36 16:12-16:23/11 | 07:34 14:36-15:20/44<br>16:21                               | 08:32 14:35-14:55/20<br>15:39 14:04-14:33/29 |
| 8                           | 04:35<br>22:02 | 05:28<br>21:11 | 06:29<br>19:54                | 07:30 16:52-17:19/27<br>18:33 16:07-16:27/20 | 07:36 14:37-15:14/37<br>16:19                               | 08:33 14:37-14:55/18<br>15:38 14:05-14:33/28 |
| 9                           | 04:37<br>22:01 | 05:30<br>21:09 | 06:31<br>19:51                | 07:32 16:51-17:21/30<br>18:31 16:05-16:30/25 | 07:38 14:37-15:13/36<br>16:17                               | 08:34 14:37-14:55/18<br>15:38 14:05-14:33/28 |
| 10                          | 04:38<br>22:00 | 05:32<br>21:06 | 06:33<br>19:48                | 07:34 16:50-17:21/31<br>18:28 16:02-16:32/30 | 07:40 14:37-15:12/35<br>16:15                               | 08:36 14:38-14:55/17<br>15:37 14:06-14:34/28 |
| 11                          | 04:39<br>21:59 | 05:33<br>21:04 | 06:35<br>19:45                | 07:36 16:49-17:21/32<br>18:25 16:00-16:33/33 | 07:42 14:39-15:12/33<br>16:13                               | 08:37 14:39-14:54/15<br>15:37 14:06-14:34/28 |
| 12                          | 04:40<br>21:58 | 05:35<br>21:02 | 06:37<br>19:43                | 07:38 16:48-17:21/33<br>18:23 15:58-16:34/36 | 07:44 14:39-15:11/32<br>16:11                               | 08:38 14:39-14:53/14<br>15:37 14:06-14:34/28 |
| 13                          | 04:42<br>21:57 | 05:37<br>20:59 | 06:39<br>19:40                | 07:40 16:48-17:21/33<br>18:20 15:57-16:35/38 | 07:46 14:11-14:13/2<br>16:10 14:41-15:11/30                 | 08:39 14:41-14:54/13<br>15:36 14:08-14:35/27 |
| 14                          | 04:43<br>21:56 | 05:39<br>20:57 | 06:41 18:08-18:17/9<br>19:37  | 07:42 16:47-17:21/34<br>18:18 15:55-16:35/40 | 07:49 14:06-14:17/11<br>16:08 14:42-15:09/27                | 08:40 14:41-14:53/12<br>15:36 14:08-14:35/27 |
| 15                          | 04:45<br>21:54 | 05:41<br>20:55 | 06:43 18:05-18:20/15<br>19:35 | 07:44 16:48-17:21/33<br>18:15 15:55-16:36/41 | 07:51 14:36-14:41/5 14:43-15:08/25<br>16:06 14:03-14:19/16  | 08:41 14:42-14:53/11<br>15:36 14:09-14:35/26 |
| 16                          | 04:46<br>21:53 | 05:43<br>20:52 | 06:45 18:02-18:22/20<br>19:32 | 07:46 16:47-17:20/33<br>18:13 15:54-16:37/43 | 07:53 14:34-15:07/33<br>16:04 14:03-14:22/19                | 08:42 14:43-14:53/10<br>15:36 14:09-14:35/26 |
| 17                          | 04:48<br>21:52 | 05:45<br>20:50 | 06:47 18:00-18:23/23<br>19:29 | 07:48 16:47-17:20/33<br>18:10 15:53-16:37/44 | 07:55 14:32-14:46/14 14:47-15:05/18<br>16:02 14:01-14:23/22 | 08:43 14:44-14:53/9<br>15:36 14:10-14:36/26  |
| 18                          | 04:49<br>21:50 | 05:47<br>20:48 | 06:49 17:59-18:24/25<br>19:27 | 07:50 16:47-17:19/32<br>18:08 15:52-16:37/45 | 07:57 14:30-14:47/17 14:49-15:03/14<br>16:01 14:00-14:23/23 | 08:44 14:43-14:52/9<br>15:36 14:10-14:35/25  |
| 19                          | 04:51<br>21:49 | 05:49<br>20:45 | 06:51 17:57-18:24/27<br>19:24 | 07:53 15:51-16:38/47<br>18:05 16:49-17:19/30 | 07:59 14:30-14:49/19 14:55-14:59/4<br>15:59 14:00-14:25/25  | 08:45 14:44-14:53/9<br>15:37 14:10-14:36/26  |
| 20                          | 04:52<br>21:47 | 05:51<br>20:43 | 06:53 17:56-18:25/29<br>19:21 | 07:55 15:47-16:37/50<br>18:03 16:49-17:18/29 | 08:01 14:30-14:49/19<br>15:58 14:00-14:26/26                | 08:46 14:45-14:53/8<br>15:37 14:11-14:37/26  |
| 21                          | 04:54<br>21:46 | 05:53<br>20:40 | 06:55 17:55-18:25/30<br>19:19 | 07:57 15:44-16:37/53<br>18:00 16:50-17:16/26 | 08:03 14:29-14:50/21<br>15:56 13:59-14:26/27                | 08:46 14:45-14:53/8<br>15:37 14:11-14:37/26  |
| 22                          | 04:56<br>21:44 | 05:55<br>20:38 | 06:57 17:55-18:25/30<br>19:16 | 07:59 15:42-16:37/55<br>17:58 16:50-17:14/24 | 08:05 14:30-14:51/21<br>15:54 13:59-14:28/29                | 08:47 14:46-14:54/8<br>15:38 14:12-14:38/26  |
| 23                          | 04:58<br>21:42 | 05:57<br>20:35 | 06:59 17:54-18:25/31<br>19:13 | 08:01 15:41-16:37/56<br>17:55 16:52-17:13/21 | 08:07 14:29-14:52/23<br>15:53 13:59-14:28/29                | 08:47 14:46-14:54/8<br>15:38 14:12-14:38/26  |
| 24                          | 04:59<br>21:41 | 05:59<br>20:33 | 07:01 17:54-18:24/30<br>19:10 | 08:03 15:39-16:36/57<br>17:53 16:54-17:11/17 | 08:09 14:29-14:52/23<br>15:52 13:59-14:28/29                | 08:48 14:47-14:56/9<br>15:39 14:13-14:39/26  |
| 25                          | 05:01<br>21:39 | 06:01<br>20:30 | 07:03 17:54-18:24/30<br>19:08 | 07:05 14:38-15:36/58<br>16:50 15:57-16:07/10 | 08:11 13:59-14:52/53<br>15:50                               | 08:48 14:47-14:56/9<br>15:40 14:14-14:39/25  |
| 26                          | 05:03<br>21:37 | 06:03<br>20:28 | 07:05 17:54-18:23/29<br>19:05 | 07:08 14:37-15:36/59<br>16:48                | 08:13 13:59-14:53/54<br>15:49                               | 08:48 14:47-14:57/10<br>15:40 14:14-14:40/26 |
| 27                          | 05:05<br>21:35 | 06:05<br>20:25 | 07:07 17:54-18:22/28<br>19:02 | 07:10 14:36-15:35/59<br>16:46                | 08:15 14:30-14:53/23<br>15:48 13:59-14:29/30                | 08:49 14:48-14:58/10<br>15:41 14:14-14:40/26 |
| 28                          | 05:06<br>21:34 | 06:07<br>20:22 | 07:09 17:54-18:21/27<br>19:00 | 07:12 14:35-15:34/59<br>16:43                | 08:17 14:00-14:53/53<br>15:47                               | 08:49 14:48-14:59/11<br>15:42 14:15-14:41/26 |
| 29                          | 05:08<br>21:32 | 06:09<br>20:20 | 07:11 17:55-18:21/26<br>18:57 | 07:14 14:35-15:34/59<br>16:41                | 08:18 14:00-14:54/54<br>15:45                               | 08:49 14:48-15:00/12<br>15:43 14:15-14:41/26 |
| 30                          | 05:10<br>21:30 | 06:11<br>20:17 | 07:13 17:56-18:20/24<br>18:54 | 07:16 14:35-15:33/58<br>16:39                | 08:20 14:32-14:54/22<br>15:44 14:01-14:31/30                | 08:49 14:49-15:01/12<br>15:44 14:16-14:42/26 |
| 31                          | 05:12<br>21:28 | 06:13<br>20:15 |                               | 07:18 14:34-15:32/58<br>16:36                |   | 08:49 14:48-15:02/14<br>15:45 14:15-14:42/27 |
| Potential sun hours         | 529            | 469            | 384                           | 324  | 248   | 217  |
| Sum of minutes with flicker | 0              | 0              | 433                           | 1799   | 1424  | 1265   |

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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: P19.2b - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 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          | 05:38-05:54/16 |
|                             | 15:47   |                | 16:44    | 17:46 | 19:51 | 20:53 | 21:50          |                |
| 2                           | 08:48   | 14:49-15:06/17 | 08:11    | 07:06 | 06:45 | 05:29 | 04:34          | 05:39-05:53/14 |
|                             | 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          | 05:40-05:52/12 |
|                             | 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          | 05:41-05:52/11 |
|                             | 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          | 05:42-05:51/9  |
|                             | 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          | 05:44-05:50/6  |
|                             | 15:54   |                | 16:55    | 17:57 | 20:02 | 21:03 | 21:56          |                |
| 7                           | 08:46   | 14:49-15:14/25 | 08:01    | 06:53 | 06:31 | 05:18 | 04:29          |                |
|                             | 15:55   |                | 16:57    | 17:59 | 20:04 | 21:05 | 21:58          |                |
| 8                           | 08:45   | 14:49-15:15/26 | 07:58    | 06:51 | 06:29 | 05:16 | 04:28          |                |
|                             | 15:57   |                | 17:00    | 18:01 | 20:06 | 21:07 | 21:59          |                |
| 9                           | 08:44   | 14:50-15:17/27 | 07:56    | 06:48 | 06:26 | 05:14 | 05:43-05:48/5  | 04:28          |
|                             | 15:59   |                | 17:02    | 18:03 | 20:08 | 21:09 | 22:00          |                |
| 10                          | 08:44   | 14:50-15:19/29 | 07:54    | 06:46 | 06:23 | 05:12 | 05:41-05:51/10 | 04:27          |
|                             | 16:00   |                | 17:04    | 18:05 | 20:10 | 21:11 | 22:01          |                |
| 11                          | 08:43   | 14:50-15:21/31 | 07:52    | 06:43 | 06:21 | 05:09 | 05:39-05:52/13 | 04:27          |
|                             | 16:02   |                | 17:06    | 18:07 | 20:12 | 21:13 | 22:02          |                |
| 12                          | 08:42   | 14:51-15:23/32 | 07:50    | 06:40 | 06:18 | 05:07 | 05:37-05:53/16 | 04:26          |
|                             | 16:04   |                | 17:09    | 18:10 | 20:14 | 21:15 | 22:02          |                |
| 13                          | 08:41   | 14:51-15:26/35 | 07:47    | 06:38 | 06:16 | 05:05 | 05:35-05:54/19 | 04:26          |
|                             | 16:05   |                | 17:11    | 18:12 | 20:16 | 21:17 | 22:03          |                |
| 14                          | 08:40   | 14:51-15:27/36 | 07:45    | 06:35 | 06:13 | 05:03 | 05:35-05:55/20 | 04:25          |
|                             | 16:07   |                | 17:13    | 18:14 | 20:18 | 21:19 | 22:04          |                |
| 15                          | 08:39   | 14:52-15:30/38 | 07:43    | 06:33 | 06:11 | 05:02 | 05:34-05:55/21 | 04:25          |
|                             | 16:09   |                | 17:15    | 18:16 | 20:20 | 21:21 | 22:05          |                |
| 16                          | 08:38   | 14:52-15:31/39 | 07:41    | 06:30 | 06:08 | 05:00 | 05:34-05:56/22 | 04:25          |
|                             | 16:11   |                | 17:17    | 18:18 | 20:22 | 21:23 | 22:05          |                |
| 17                          | 08:36   | 14:53-15:34/41 | 07:38    | 06:27 | 06:05 | 04:58 | 05:34-05:56/22 | 04:25          |
|                             | 16:13   |                | 17:20    | 18:20 | 20:24 | 21:25 | 22:06          |                |
| 18                          | 08:35   | 14:53-15:35/42 | 07:36    | 06:25 | 06:03 | 04:56 | 05:33-05:56/23 | 04:24          |
|                             | 16:15   |                | 17:22    | 18:22 | 20:26 | 21:27 | 22:06          |                |
| 19                          | 08:34   | 14:54-15:37/43 | 07:34    | 06:22 | 06:00 | 04:54 | 05:33-05:56/23 | 04:24          |
|                             | 16:17   |                | 17:24    | 18:24 | 20:28 | 21:29 | 22:07          |                |
| 20                          | 08:32   | 14:55-15:37/42 | 07:31    | 06:19 | 05:58 | 04:52 | 05:33-05:57/24 | 04:24          |
|                             | 16:19   |                | 17:26    | 18:26 | 20:31 | 21:31 | 22:07          |                |
| 21                          | 08:31   | 14:55-15:37/42 | 07:29    | 06:17 | 05:55 | 04:51 | 05:33-05:56/23 | 04:25          |
|                             | 16:21   |                | 17:29    | 18:28 | 20:33 | 21:32 | 22:07          |                |
| 22                          | 08:30   | 14:57-15:38/41 | 07:26    | 06:14 | 05:53 | 04:49 | 05:33-05:57/24 | 04:25          |
|                             | 16:23   |                | 17:31    | 18:30 | 20:35 | 21:34 | 22:08          |                |
| 23                          | 08:28   | 14:58-15:38/40 | 07:24    | 06:11 | 05:50 | 04:47 | 05:34-05:57/23 | 04:25          |
|                             | 16:25   |                | 17:33    | 18:33 | 20:37 | 21:36 | 22:08          |                |
| 24                          | 08:27   | 15:00-15:38/38 | 07:21    | 06:09 | 05:48 | 04:46 | 05:34-05:56/22 | 04:25          |
|                             | 16:27   |                | 17:35    | 18:35 | 20:39 | 21:38 | 22:08          |                |
| 25                          | 08:25   | 15:02-15:38/36 | 07:19    | 06:06 | 05:46 | 04:44 | 05:34-05:56/22 | 04:26          |
|                             | 16:29   |                | 17:37    | 18:37 | 20:41 | 21:39 | 22:08          |                |
| 26                          | 08:23   | 15:16-15:37/21 | 07:16    | 06:03 | 05:43 | 04:43 | 05:35-05:56/21 | 04:26          |
|                             | 16:31   | 15:07-15:12/5  | 17:40    | 18:39 | 20:43 | 21:41 | 22:08          |                |
| 27                          | 08:22   | 15:19-15:37/18 | 07:14    | 06:01 | 05:41 | 04:41 | 05:35-05:55/20 | 04:27          |
|                             | 16:33   |                | 17:42    | 18:41 | 20:45 | 21:42 | 22:08          |                |
| 28                          | 08:20   | 15:21-15:36/15 | 07:11    | 05:58 | 05:38 | 04:40 | 05:35-05:55/20 | 04:27          |
|                             | 16:35   |                | 17:44    | 18:43 | 20:47 | 21:44 | 22:07          |                |
| 29                          | 08:18   | 15:22-15:35/13 |          | 06:55 | 05:36 | 04:39 | 05:36-05:55/19 | 04:28          |
|                             | 16:38   |                |          | 19:45 | 20:49 | 21:46 | 22:07          |                |
| 30                          | 08:16   | 15:24-15:34/10 |          | 06:53 | 05:34 | 04:37 | 05:37-05:55/18 | 04:29          |
|                             | 16:40   |                |          | 19:47 | 20:51 | 21:47 | 22:07          |                |
| 31                          | 08:14   | 15:29-15:30/1  |          | 06:50 |       | 04:36 | 05:37-05:54/17 |                |
|                             | 16:42   |                |          | 19:49 |       | 21:49 |                |                |
| Potential sun hours         | 236     |                | 266      | 366   | 426   | 507   | 528            | 68             |
| Sum of minutes with flicker | 883     |                | 0        | 0     | 0     | 447   |                |                |

Table 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: P19.2b - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 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<br>22:06                | 05:15 05:48-06:03/15<br>21:26 | 06:16<br>20:12 | 07:16<br>18:52 | 07:20<br>16:35                | 08:22 14:32-15:03/31<br>15:44 |
| 2                           | 04:30<br>22:06                | 05:17 05:50-06:02/12<br>21:24 | 06:18<br>20:09 | 07:18<br>18:49 | 07:23<br>16:33                | 08:23 14:33-15:02/29<br>15:43 |
| 3                           | 04:31<br>22:05                | 05:18 05:52-06:00/8<br>21:21  | 06:20<br>20:07 | 07:20<br>18:47 | 07:25<br>16:30                | 08:25 14:34-15:01/27<br>15:42 |
| 4                           | 04:32<br>22:05                | 05:20<br>21:19                | 06:22<br>20:04 | 07:22<br>18:44 | 07:27<br>16:28                | 08:27 14:34-15:00/26<br>15:41 |
| 5                           | 04:33<br>22:04                | 05:22<br>21:17                | 06:24<br>20:02 | 07:24<br>18:41 | 07:29<br>16:26                | 08:28 14:34-14:59/25<br>15:41 |
| 6                           | 04:34 05:51-05:55/4<br>22:03  | 05:24<br>21:15                | 06:26<br>19:59 | 07:26<br>18:39 | 07:31<br>16:24                | 08:30 14:35-14:58/23<br>15:40 |
| 7                           | 04:35 05:49-05:57/8<br>22:03  | 05:26<br>21:13                | 06:28<br>19:56 | 07:28<br>18:36 | 07:33<br>16:22                | 08:31 14:36-14:58/22<br>15:39 |
| 8                           | 04:36 05:48-05:58/10<br>22:02 | 05:28<br>21:11                | 06:30<br>19:54 | 07:30<br>18:34 | 07:36<br>16:20                | 08:33 14:36-14:56/20<br>15:39 |
| 9                           | 04:37 05:47-05:59/12<br>22:01 | 05:30<br>21:09                | 06:32<br>19:51 | 07:32<br>18:31 | 07:38<br>16:18                | 08:34 14:38-14:56/18<br>15:38 |
| 10                          | 04:39 05:47-06:00/13<br>22:00 | 05:32<br>21:06                | 06:34<br>19:51 | 07:34<br>18:31 | 07:40<br>16:18                | 08:35 14:38-14:55/17<br>15:38 |
| 11                          | 04:40 05:47-06:02/15<br>21:59 | 05:34<br>21:04                | 06:36<br>19:46 | 07:36<br>18:26 | 07:42 15:00-15:03/3<br>16:14  | 08:37 14:39-14:55/16<br>15:38 |
| 12                          | 04:41 05:46-06:02/16<br>21:58 | 05:36<br>21:02                | 06:38<br>19:43 | 07:38<br>18:23 | 07:44 14:56-15:06/10<br>16:12 | 08:38 14:40-14:55/15<br>15:37 |
| 13                          | 04:43 05:45-06:03/18<br>21:57 | 05:38<br>20:59                | 06:40<br>19:40 | 07:40<br>18:21 | 07:46 14:54-15:07/13<br>16:10 | 08:39 14:40-14:54/14<br>15:37 |
| 14                          | 04:44 05:45-06:03/18<br>21:55 | 05:40<br>20:57                | 06:42<br>19:38 | 07:42<br>18:18 | 07:48 14:54-15:09/15<br>16:08 | 08:40 14:41-14:54/13<br>15:37 |
| 15                          | 04:45 05:45-06:05/20<br>21:54 | 05:42<br>20:55                | 06:44<br>19:35 | 07:44<br>18:15 | 07:51 14:51-15:10/19<br>16:06 | 08:41 14:41-14:54/13<br>15:37 |
| 16                          | 04:47 05:44-06:05/21<br>21:53 | 05:44<br>20:52                | 06:46<br>19:32 | 07:46<br>18:13 | 07:53 14:49-15:10/21<br>16:05 | 08:42 14:42-14:53/11<br>15:37 |
| 17                          | 04:48 05:44-06:05/21<br>21:51 | 05:46<br>20:50                | 06:48<br>19:30 | 07:48<br>18:10 | 07:55 14:36-15:12/36<br>16:03 | 08:43 14:43-14:54/11<br>15:37 |
| 18                          | 04:50 05:44-06:06/22<br>21:50 | 05:48<br>20:47                | 06:50<br>19:27 | 07:51<br>18:08 | 07:57 14:34-15:12/38<br>16:01 | 08:44 14:44-14:54/10<br>15:37 |
| 19                          | 04:52 05:44-06:06/22<br>21:49 | 05:50<br>20:45                | 06:52<br>19:24 | 07:53<br>18:05 | 07:59 14:32-15:12/40<br>16:00 | 08:45 14:44-14:54/10<br>15:37 |
| 20                          | 04:53 05:44-06:07/23<br>21:47 | 05:52<br>20:43                | 06:54<br>19:21 | 07:55<br>18:03 | 08:01 14:32-15:13/41<br>15:58 | 08:45 14:44-14:54/10<br>15:38 |
| 21                          | 04:55 05:43-06:06/23<br>21:45 | 05:54<br>20:40                | 06:56<br>19:19 | 07:57<br>18:01 | 08:03 14:31-15:13/42<br>15:57 | 08:46 14:45-14:55/10<br>15:38 |
| 22                          | 04:57 05:44-06:07/23<br>21:44 | 05:56<br>20:38                | 06:58<br>19:16 | 07:59<br>17:58 | 08:05 14:31-15:13/42<br>15:55 | 08:47 14:45-14:55/10<br>15:39 |
| 23                          | 04:58 05:43-06:07/24<br>21:42 | 05:58<br>20:35                | 07:00<br>19:13 | 08:01<br>17:56 | 08:07 14:30-15:13/43<br>15:54 | 08:47 14:46-14:56/10<br>15:39 |
| 24                          | 05:00 05:44-06:07/23<br>21:40 | 06:00<br>20:33                | 07:01<br>19:11 | 08:03<br>17:53 | 08:09 14:31-15:13/42<br>15:52 | 08:47 14:46-14:56/10<br>15:40 |
| 25                          | 05:02 05:44-06:07/23<br>21:39 | 06:02<br>20:30                | 07:03<br>19:08 | 07:05<br>16:51 | 08:11 14:31-15:12/41<br>15:51 | 08:48 14:46-14:57/11<br>15:40 |
| 26                          | 05:04 05:44-06:07/23<br>21:37 | 06:04<br>20:28                | 07:05<br>19:05 | 07:08<br>16:48 | 08:13 14:31-15:10/39<br>15:50 | 08:48 14:47-14:57/10<br>15:41 |
| 27                          | 05:05 05:44-06:07/23<br>21:35 | 06:06<br>20:25                | 07:07<br>19:03 | 07:10<br>16:46 | 08:15 14:31-15:09/38<br>15:48 | 08:48 14:48-14:59/11<br>15:42 |
| 28                          | 05:07 05:44-06:06/22<br>21:33 | 06:08<br>20:22                | 07:09<br>19:00 | 07:12<br>16:44 | 08:16 14:31-15:07/36<br>15:47 | 08:48 14:47-14:59/12<br>15:43 |
| 29                          | 05:09 05:45-06:05/20<br>21:31 | 06:10<br>20:20                | 07:12<br>18:57 | 07:14<br>16:42 | 08:18 14:32-15:06/34<br>15:46 | 08:48 14:48-15:00/12<br>15:44 |
| 30                          | 05:11 05:46-06:05/19<br>21:30 | 06:12<br>20:17                | 07:14<br>18:55 | 07:16<br>16:39 | 08:20 14:32-15:05/33<br>15:45 | 08:48 14:48-15:02/14<br>15:45 |
| 31                          | 05:13 05:47-06:05/18<br>21:28 | 06:14<br>20:15                |                | 07:18<br>16:37 |                               | 08:48 14:48-15:03/15<br>15:46 |
| Potential sun hours         | 528                           | 469                           | 384            | 324            | 248                           | 217                           |
| Sum of minutes with flicker | 484                           | 35                            | 0              | 0              | 631                           | 486                           |

Table 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: Pr11 - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 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 12:07-12:56/49<br>15:47 13:48-14:23/35 | 08:13 14:02-14:29/27<br>16:43 15:26-15:46/20 | 07:09 15:28-15:45/17<br>17:46 | 06:47<br>19:51 | 05:31<br>20:53 | 04:34<br>21:50 |
| 2                           | 08:48 12:07-12:56/49<br>15:48 13:47-14:23/36 | 08:11 14:04-14:28/24<br>16:46 15:24-15:48/24 | 07:06 15:34-15:39/5<br>17:48  | 06:44<br>19:53 | 05:28<br>20:55 | 04:33<br>21:52 |
| 3                           | 08:48 12:08-12:57/49<br>15:49 13:48-14:24/36 | 08:09 14:06-14:26/20<br>16:48 15:23-15:50/27 | 07:04<br>17:50                | 06:42<br>19:55 | 05:26<br>20:57 | 04:32<br>21:53 |
| 4                           | 08:48 12:08-12:57/49<br>15:50 13:48-14:25/37 | 08:07 14:09-14:24/15<br>16:50 15:22-15:52/30 | 07:01<br>17:52                | 06:39<br>19:57 | 05:24<br>20:59 | 04:31<br>21:54 |
| 5                           | 08:47 12:08-12:56/48<br>15:52 13:48-14:25/37 | 08:05 14:15-14:17/2<br>16:52 15:20-15:53/33  | 06:59<br>17:54                | 06:36<br>19:59 | 05:22<br>21:02 | 04:30<br>21:56 |
| 6                           | 08:47 12:09-12:57/48<br>15:53 13:49-14:27/38 | 08:03 15:19-15:54/35<br>16:55                | 06:56<br>17:56                | 06:34<br>20:01 | 05:19<br>21:04 | 04:29<br>21:57 |
| 7                           | 08:46 12:10-12:58/48<br>15:55 13:49-14:27/38 | 08:01 15:19-15:55/36<br>16:57                | 06:53<br>17:59                | 06:31<br>20:03 | 05:17<br>21:06 | 04:28<br>21:58 |
| 8                           | 08:45 12:10-12:58/48<br>15:56 13:49-14:28/39 | 07:58 15:19-15:57/38<br>16:59                | 06:51<br>18:01                | 06:28<br>20:06 | 05:15<br>21:08 | 04:28<br>21:59 |
| 9                           | 08:45 12:10-12:58/48<br>15:58 13:49-14:28/39 | 07:56 16:17-16:22/5<br>17:01 15:17-15:57/40  | 06:48<br>18:03                | 06:26<br>20:08 | 05:13<br>21:10 | 04:27<br>22:00 |
| 10                          | 08:44 12:11-12:58/47<br>15:59 13:50-14:29/39 | 07:54 16:14-16:27/13<br>17:04 15:17-15:58/41 | 06:45<br>18:05                | 06:23<br>20:10 | 05:11<br>21:12 | 04:26<br>22:01 |
| 11                          | 08:43 12:12-12:58/46<br>16:01 13:49-14:29/40 | 07:52 16:11-16:29/18<br>17:06 15:16-15:58/42 | 06:43<br>18:07                | 06:20<br>20:12 | 05:09<br>21:14 | 04:26<br>22:02 |
| 12                          | 08:42 12:12-12:57/45<br>16:03 13:50-14:29/39 | 07:50 16:10-16:31/21<br>17:08 15:16-15:59/43 | 06:40<br>18:09                | 06:18<br>20:14 | 05:07<br>21:16 | 04:25<br>22:03 |
| 13                          | 08:41 12:12-12:57/45<br>16:05 13:50-14:30/40 | 07:47 16:09-16:32/23<br>17:10 15:16-15:59/43 | 06:38<br>18:11                | 06:15<br>20:16 | 05:05<br>21:18 | 04:25<br>22:04 |
| 14                          | 08:40 12:13-12:58/45<br>16:06 13:51-14:31/40 | 07:45 16:08-16:33/25<br>17:13 15:15-15:59/44 | 06:35<br>18:13                | 06:13<br>20:18 | 05:03<br>21:19 | 04:24<br>22:04 |
| 15                          | 08:39 12:13-12:57/44<br>16:08 13:50-14:31/41 | 07:43 16:07-16:34/27<br>17:15 15:16-15:59/43 | 06:32<br>18:16                | 06:10<br>20:20 | 05:01<br>21:21 | 04:24<br>22:05 |
| 16                          | 08:38 12:14-12:58/44<br>16:10 13:51-14:32/41 | 07:41 16:06-16:34/28<br>17:17 15:15-15:59/44 | 06:30<br>18:18                | 06:08<br>20:22 | 04:59<br>21:23 | 04:24<br>22:06 |
| 17                          | 08:37 12:15-12:57/42<br>16:12 13:51-14:32/41 | 07:38 16:06-16:35/29<br>17:19 15:16-15:59/43 | 06:27<br>18:20                | 06:05<br>20:24 | 04:57<br>21:25 | 04:24<br>22:06 |
| 18                          | 08:35 12:16-12:58/42<br>16:14 13:52-14:33/41 | 07:36 16:05-16:34/29<br>17:21 15:15-15:59/44 | 06:24<br>18:22                | 06:02<br>20:26 | 04:55<br>21:27 | 04:24<br>22:07 |
| 19                          | 08:34 12:16-12:57/41<br>16:16 13:52-14:32/40 | 07:33 16:06-16:35/29<br>17:24 15:16-15:59/43 | 06:22<br>18:24                | 06:00<br>20:28 | 04:53<br>21:29 | 04:24<br>22:07 |
| 20                          | 08:33 12:17-12:57/40<br>16:18 13:52-14:32/40 | 07:31 16:05-16:35/30<br>17:26 15:16-15:58/42 | 06:19<br>18:26                | 05:57<br>20:30 | 04:52<br>21:31 | 04:24<br>22:07 |
| 21                          | 08:31 12:18-12:57/39<br>16:20 13:53-14:33/40 | 07:29 16:06-16:35/29<br>17:28 15:17-15:58/41 | 06:16<br>18:28                | 05:55<br>20:33 | 04:50<br>21:33 | 04:24<br>22:08 |
| 22                          | 08:30 13:53-14:33/40<br>16:22 12:19-12:56/37 | 07:26 16:06-16:34/28<br>17:30 15:17-15:57/40 | 06:14<br>18:30                | 05:52<br>20:35 | 04:48<br>21:34 | 04:24<br>22:08 |
| 23                          | 08:28 13:54-14:33/39<br>16:24 12:20-12:56/36 | 07:24 16:07-16:34/27<br>17:33 15:19-15:56/37 | 06:11<br>18:32                | 05:50<br>20:37 | 04:47<br>21:36 | 04:24<br>22:08 |
| 24                          | 08:27 13:54-14:33/39<br>16:26 12:21-12:55/34 | 07:21 16:07-16:33/26<br>17:35 15:19-15:55/36 | 06:08<br>18:34                | 05:47<br>20:39 | 04:45<br>21:38 | 04:24<br>22:08 |
| 25                          | 08:25 13:54-14:33/39<br>16:28 12:22-12:54/32 | 07:19 16:07-16:31/24<br>17:37 15:20-15:53/33 | 06:06<br>18:36                | 05:45<br>20:41 | 04:44<br>21:39 | 04:25<br>22:08 |
| 26                          | 08:23 13:56-14:33/37<br>16:30 12:25-12:54/29 | 07:16 16:09-16:30/21<br>17:39 15:22-15:53/31 | 06:03<br>18:39                | 05:43<br>20:43 | 04:42<br>21:41 | 04:25<br>22:08 |
| 27                          | 08:22 13:57-14:33/36<br>16:33 12:27-12:52/25 | 07:14 16:10-16:28/18<br>17:41 15:23-15:50/27 | 06:00<br>18:41                | 05:40<br>20:45 | 04:41<br>21:43 | 04:26<br>22:08 |
| 28                          | 08:20 13:58-14:33/35<br>16:35 12:29-12:51/22 | 07:11 16:13-16:26/13<br>17:43 15:26-15:49/23 | 05:58<br>18:43                | 05:38<br>20:47 | 04:39<br>21:44 | 04:26<br>22:08 |
| 29                          | 08:18 13:59-14:32/33<br>16:37 12:32-12:48/16 |  | 06:55<br>19:45                | 05:35<br>20:49 | 04:38<br>21:46 | 04:27<br>22:07 |
| 30                          | 08:16 13:59-14:31/32 15:33-15:37/4           |  | 06:52<br>19:47                | 05:33<br>20:51 | 04:37<br>21:47 | 04:28<br>22:07 |
| 31                          | 08:14 14:00-14:30/30<br>16:41 15:28-15:43/15 |  | 06:50<br>19:49                |                | 04:35<br>21:49 |                |
| Potential sun hours         | 236  | 266  | 366                           | 426            | 507            | 528            |
| Sum of minutes with flicker | 2390   | 1574   | 22                            | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: Pr11 - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 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<br>22:07 | 05:14<br>21:26 | 06:15<br>20:12 | 07:15<br>18:52                               | 07:20 15:44-15:56/12<br>16:34 14:47-15:27/40              | 08:22 11:53-12:39/46<br>15:43 13:31-14:11/40 |
| 2                           | 04:29<br>22:06 | 05:16<br>21:24 | 06:17<br>20:09 | 07:17<br>18:49                               | 07:23 14:47-15:26/39<br>16:32                             | 08:24 11:53-12:40/47<br>15:42 13:32-14:11/39 |
| 3                           | 04:30<br>22:06 | 05:18<br>21:22 | 06:19<br>20:07 | 07:19<br>18:46                               | 07:25 14:48-15:26/38<br>16:30                             | 08:25 11:54-12:41/47<br>15:42 13:33-14:11/38 |
| 4                           | 04:31<br>22:05 | 05:20<br>21:19 | 06:21<br>20:04 | 07:21<br>18:44                               | 07:27 14:49-15:25/36<br>16:28                             | 08:27 11:54-12:42/48<br>15:41 13:33-14:12/39 |
| 5                           | 04:32<br>22:04 | 05:22<br>21:17 | 06:23<br>20:01 | 07:23<br>18:41                               | 07:29 14:49-15:24/35<br>16:25                             | 08:29 11:55-12:43/48<br>15:40 13:34-14:12/38 |
| 6                           | 04:33<br>22:04 | 05:24<br>21:15 | 06:25<br>19:59 | 07:25<br>18:38                               | 07:31 13:44-13:49/5<br>16:23 14:51-15:23/32               | 08:30 11:54-12:43/49<br>15:39 13:34-14:12/38 |
| 7                           | 04:34<br>22:03 | 05:26<br>21:13 | 06:27<br>19:56 | 07:28<br>18:36                               | 07:34 13:39-13:54/15<br>16:21 14:52-15:22/30              | 08:32 11:55-12:44/49<br>15:39 13:35-14:12/37 |
| 8                           | 04:35<br>22:02 | 05:28<br>21:11 | 06:29<br>19:53 | 07:30<br>18:33                               | 07:36 13:37-13:57/20<br>16:19 14:54-15:21/27              | 08:33 11:56-12:45/49<br>15:38 13:36-14:13/37 |
| 9                           | 04:37<br>22:01 | 05:30<br>21:09 | 06:31<br>19:51 | 07:32<br>18:31                               | 07:38 13:34-13:59/25<br>16:17 14:55-15:19/24              | 08:34 11:56-12:45/49<br>15:38 13:36-14:13/37 |
| 10                          | 04:38<br>22:00 | 05:31<br>21:06 | 06:33<br>19:48 | 07:34<br>18:28                               | 07:40 13:33-14:00/27<br>16:15 14:57-15:17/20              | 08:36 11:57-12:46/49<br>15:37 13:37-14:13/36 |
| 11                          | 04:39<br>21:59 | 05:33<br>21:04 | 06:35<br>19:45 | 07:36<br>18:25                               | 07:42 13:32-14:02/30<br>16:13 15:01-15:15/14              | 08:37 11:57-12:46/49<br>15:37 13:38-14:13/35 |
| 12                          | 04:40<br>21:58 | 05:35<br>21:02 | 06:37<br>19:43 | 07:38 16:04-16:16/12<br>18:23                | 07:44 13:31-14:03/32 15:07-15:08/1<br>16:11 12:07-12:15/8 | 08:38 11:57-12:46/49<br>15:37 13:38-14:13/35 |
| 13                          | 04:42<br>21:57 | 05:37<br>20:59 | 06:39<br>19:40 | 07:40 16:48-16:57/9<br>18:20 16:00-16:20/20  | 07:46 13:31-14:04/33<br>16:10 12:03-12:20/17              | 08:39 11:58-12:48/50<br>15:36 13:38-14:13/35 |
| 14                          | 04:43<br>21:56 | 05:39<br>20:57 | 06:41<br>19:37 | 07:42 16:44-16:59/15<br>18:18 15:57-16:22/25 | 07:49 13:30-14:05/35<br>16:08 12:01-12:23/22              | 08:40 11:59-12:48/49<br>15:36 13:40-14:14/34 |
| 15                          | 04:45<br>21:54 | 05:41<br>20:55 | 06:43<br>19:35 | 07:44 16:43-17:02/19<br>18:15 15:55-16:24/29 | 07:51 13:29-14:05/36<br>16:06 11:59-12:24/25              | 08:41 11:59-12:48/49<br>15:36 13:40-14:14/34 |
| 16                          | 04:46<br>21:53 | 05:43<br>20:52 | 06:45<br>19:32 | 07:46 16:41-17:03/22<br>18:13 15:53-16:25/32 | 07:53 13:29-14:06/37<br>16:04 11:58-12:27/29              | 08:42 11:59-12:49/50<br>15:36 13:41-14:15/34 |
| 17                          | 04:48<br>21:52 | 05:45<br>20:50 | 06:47<br>19:29 | 07:48 16:39-17:04/25<br>18:10 15:51-16:26/35 | 07:55 13:28-14:07/39<br>16:02 11:56-12:28/32              | 08:43 12:00-12:49/49<br>15:36 13:42-14:15/33 |
| 18                          | 04:49<br>21:50 | 05:47<br>20:47 | 06:49<br>19:27 | 07:50 16:38-17:04/26<br>18:08 15:50-16:27/37 | 07:57 13:28-14:07/39<br>16:01 11:55-12:29/34              | 08:44 12:00-12:49/49<br>15:36 13:41-14:15/34 |
| 19                          | 04:51<br>21:49 | 05:49<br>20:45 | 06:51<br>19:24 | 07:53 16:37-17:04/27<br>18:05 15:48-16:27/39 | 07:59 13:29-14:08/39<br>15:59 11:55-12:31/36              | 08:45 12:00-12:50/50<br>15:37 13:42-14:15/33 |
| 20                          | 04:52<br>21:47 | 05:51<br>20:43 | 06:53<br>19:21 | 07:55 16:37-17:05/28<br>18:03 15:48-16:28/40 | 08:01 13:28-14:08/40<br>15:57 11:54-12:31/37              | 08:46 12:01-12:51/50<br>15:37 13:43-14:16/33 |
| 21                          | 04:54<br>21:46 | 05:53<br>20:40 | 06:55<br>19:19 | 07:57 16:36-17:05/29<br>18:00 15:47-16:28/41 | 08:03 11:53-12:32/39<br>15:56 13:28-14:08/40              | 08:47 12:02-12:52/50<br>15:38 13:44-14:17/33 |
| 22                          | 04:56<br>21:44 | 05:55<br>20:38 | 06:57<br>19:16 | 07:59 16:36-17:05/29<br>17:58 15:46-16:28/42 | 08:05 11:54-12:34/40<br>15:54 13:28-14:08/40              | 08:47 12:02-12:52/50<br>15:38 13:44-14:17/33 |
| 23                          | 04:58<br>21:42 | 05:57<br>20:35 | 06:59<br>19:13 | 08:01 16:36-17:05/29<br>17:55 15:46-16:29/43 | 08:07 11:53-12:34/41<br>15:53 13:29-14:10/41              | 08:47 12:02-12:52/50<br>15:38 13:44-14:17/33 |
| 24                          | 04:59<br>21:41 | 05:59<br>20:33 | 07:01<br>19:10 | 08:03 16:36-17:05/29<br>17:53 15:46-16:29/43 | 08:09 11:53-12:35/42<br>15:52 13:29-14:10/41              | 08:48 12:03-12:53/50<br>15:39 13:45-14:18/33 |
| 25                          | 05:01<br>21:39 | 06:01<br>20:30 | 07:03<br>19:08 | 07:05 15:36-16:04/28<br>16:50 14:45-15:29/44 | 08:11 11:53-12:35/42<br>15:50 13:29-14:10/41              | 08:48 12:04-12:53/49<br>15:40 13:45-14:19/34 |
| 26                          | 05:03<br>21:37 | 06:03<br>20:27 | 07:05<br>19:05 | 07:07 15:37-16:04/27<br>16:48 14:46-15:29/43 | 08:13 11:52-12:36/44<br>15:49 13:29-14:10/41              | 08:48 12:04-12:53/49<br>15:40 13:46-14:19/33 |
| 27                          | 05:05<br>21:35 | 06:05<br>20:25 | 07:07<br>19:02 | 07:10 15:37-16:03/26<br>16:46 14:45-15:29/44 | 08:15 11:52-12:36/44<br>15:48 13:29-14:10/41              | 08:49 12:04-12:54/50<br>15:41 13:46-14:20/34 |
| 28                          | 05:06<br>21:33 | 06:07<br>20:22 | 07:09<br>19:00 | 07:12 15:37-16:02/25<br>16:43 14:45-15:28/43 | 08:17 11:52-12:37/45<br>15:47 13:30-14:10/40              | 08:49 12:05-12:54/49<br>15:42 13:46-14:20/34 |
| 29                          | 05:08<br>21:32 | 06:09<br>20:20 | 07:11<br>18:57 | 07:14 15:39-16:01/22<br>16:41 14:46-15:29/43 | 08:18 11:53-12:38/45<br>15:45 13:30-14:10/40              | 08:49 12:05-12:55/50<br>15:43 13:47-14:21/34 |
| 30                          | 05:10<br>21:30 | 06:11<br>20:17 | 07:13<br>18:54 | 07:16 15:40-16:00/20<br>16:39 14:46-15:28/42 | 08:20 11:54-12:39/45<br>15:44 13:31-14:11/40              | 08:49 12:06-12:55/49<br>15:44 13:47-14:22/35 |
| 31                          | 05:12<br>21:28 | 06:13<br>20:15 |                | 07:18 15:41-15:58/17<br>16:36 14:46-15:27/41 |   | 08:49 12:06-12:55/49<br>15:45 13:47-14:22/35 |
| Potential sun hours         | 529            | 469            | 384            | 324  | 248   | 217  |
| Sum of minutes with flicker | 0              | 0              | 0              | 1190   | 1872  | 2610   |

Table 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: Pr12 - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 m) (27)  
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) []

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

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

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

Project:

Flickering\_Vestas\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: Pr25 - VESTAS V162-6.2 6200 162.0 !OI! hub: 166,0 m (TOT: 247,0 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 09:28-09:29/1<br>15:46  | 08:12<br>16:43                               | 07:09 16:53-17:14/21 08:06-08:24/18<br>17:46 08:45-09:20/35 07:43-08:03/20 | 06:47 18:44-19:23/39<br>19:51 | 05:31 19:39-20:14/35<br>20:53               | 04:34 20:19-20:31/12<br>21:50 |
| 2                           | 08:48 09:27-09:29/2<br>15:48  | 08:11<br>16:46                               | 07:06 16:52-17:14/22 08:07-08:22/15<br>17:48 08:46-09:18/32 07:41-08:04/23 | 06:44 18:44-19:24/40<br>19:53 | 05:28 19:39-20:14/35<br>20:55               | 04:33 20:20-20:30/10<br>21:52 |
| 3                           | 08:48 09:27-09:31/4<br>15:49  | 08:09<br>16:48                               | 07:04 16:52-17:15/23 08:10-08:19/9<br>17:50 08:48-09:16/28 07:41-08:06/25  | 06:41 18:44-19:26/42<br>19:55 | 05:26 19:40-20:14/34<br>20:57               | 04:32 20:22-20:28/6<br>21:53  |
| 4                           | 08:47 09:26-09:32/6<br>15:50  | 08:07<br>16:50                               | 07:01 16:52-17:15/23 07:39-08:06/27<br>17:52 08:50-09:14/24                | 06:39 19:04-19:29/25<br>19:57 | 05:24 19:40-20:13/33<br>20:59               | 04:31 20:21-20:27/6<br>21:54  |
| 5                           | 08:47 09:25-09:33/8<br>15:52  | 08:05 08:59-09:07/8<br>16:52                 | 06:58 17:23-17:25/2 08:52-09:10/18<br>17:54 16:51-17:14/23 07:38-08:07/29  | 06:36 19:04-19:30/26<br>19:59 | 05:22 19:41-20:12/31<br>21:01               | 04:30 20:21-20:27/6<br>21:55  |
| 6                           | 08:46 09:25-09:34/9<br>15:53  | 08:03 08:55-09:12/17<br>16:55                | 06:56 17:20-17:28/8 08:57-09:06/9<br>17:56 16:52-17:14/22 07:38-08:08/30   | 06:33 19:05-19:33/28<br>20:01 | 05:19 19:42-20:11/29<br>21:03               | 04:29 20:18-20:30/12<br>21:57 |
| 7                           | 08:46 09:24-09:35/11<br>15:55 | 08:00 08:53-09:15/22<br>16:57                | 06:53 17:18-17:30/12 07:37-08:07/30<br>17:58 16:52-17:13/21                | 06:31 19:06-19:34/28<br>20:03 | 05:17 19:42-20:09/27<br>21:05               | 04:28 20:16-20:32/16<br>21:58 |
| 8                           | 08:45 09:23-09:36/13<br>15:56 | 07:58 08:52-09:17/25<br>16:59                | 06:51 17:16-17:32/16 07:36-08:07/31<br>18:01 16:52-17:12/20                | 06:28 19:08-19:36/28<br>20:05 | 05:15 19:44-20:01/17 20:02-20:06/4<br>21:07 | 04:27 20:14-20:33/19<br>21:59 |
| 9                           | 08:44 09:22-09:37/15<br>15:58 | 07:56 08:49-09:18/29<br>17:01                | 06:48 17:15-17:34/19 07:37-08:07/30<br>18:03 16:53-17:10/17                | 06:26 19:10-19:37/27<br>20:08 | 05:13 19:45-19:59/14<br>21:10               | 04:27 20:13-20:34/21<br>22:00 |
| 10                          | 08:44 09:21-09:38/17<br>15:59 | 07:54 08:48-09:20/32<br>17:03                | 06:45 17:15-17:35/20 07:36-08:07/31<br>18:05 16:55-17:09/14                | 06:23 19:11-19:36/25<br>20:10 | 05:11 19:47-19:57/10<br>21:11               | 04:26 20:12-20:35/23<br>22:01 |
| 11                          | 08:43 09:21-09:39/18<br>16:01 | 07:52 08:47-09:21/34<br>17:06                | 06:43 17:14-17:35/21 07:36-08:06/30<br>18:07 16:57-17:06/9                 | 06:20 19:16-19:36/20<br>20:12 | 05:09 20:11-20:35/24<br>21:13               | 04:26 20:11-20:35/24<br>22:02 |
| 12                          | 08:42 09:20-09:39/19<br>16:03 | 07:50 08:46-09:22/36<br>17:08                | 06:40 17:13-17:34/21<br>18:09 07:37-08:06/29                               | 06:18 19:15-19:35/20<br>20:14 | 05:07 20:11-20:35/24<br>21:15               | 04:25 20:10-20:37/26<br>22:03 |
| 13                          | 08:41 09:20-09:39/19<br>16:04 | 07:47 08:46-09:23/37<br>17:10                | 06:37 17:14-17:34/20<br>18:11 07:37-08:04/27                               | 06:15 19:16-19:34/18<br>20:16 | 05:05 20:11-20:37/26<br>21:17               | 04:25 20:10-20:37/26<br>22:04 |
| 14                          | 08:40 09:21-09:40/19<br>16:06 | 07:45 08:44-09:24/40<br>17:12                | 06:35 17:14-17:33/19<br>18:13 07:37-08:03/26                               | 06:13 19:17-19:33/16<br>20:18 | 05:03 20:11-20:37/26<br>21:19               | 04:24 20:10-20:37/27<br>22:04 |
| 15                          | 08:39 09:21-09:40/19<br>16:08 | 07:43 08:44-09:25/41<br>17:15                | 06:32 17:14-17:32/18 07:39-08:02/23<br>18:15 17:44-17:47/3                 | 06:10 19:18-19:31/13<br>20:20 | 05:01 20:10-20:37/27<br>21:21               | 04:24 20:10-20:36/26<br>22:05 |
| 16                          | 08:38 09:21-09:41/20<br>16:10 | 07:40 08:43-09:25/42<br>17:17                | 06:30 17:16-17:31/15 07:40-08:00/20<br>18:18 17:42-17:50/8                 | 06:07 19:20-19:28/8<br>20:22  | 04:59 20:10-20:36/26<br>21:23               | 04:24 20:10-20:36/26<br>22:06 |
| 17                          | 08:36 09:21-09:41/20<br>16:12 | 07:38 08:43-09:25/42<br>17:19                | 06:27 17:17-17:29/12 07:42-07:57/15<br>18:20 17:40-17:52/12                | 06:05 19:16-19:34/18<br>20:24 | 04:57 20:10-20:37/27<br>21:25               | 04:24 20:10-20:37/27<br>22:06 |
| 18                          | 08:35 09:22-09:42/20<br>16:14 | 07:36 08:43-09:25/42<br>17:21                | 06:24 17:21-17:24/3 07:45-07:52/7<br>18:22 17:38-17:53/15                  | 06:02 19:15-19:34/18<br>20:26 | 04:55 20:10-20:37/27<br>21:27               | 04:23 20:10-20:37/27<br>22:07 |
| 19                          | 08:34 09:22-09:42/20<br>16:16 | 07:33 08:43-09:26/43<br>17:24                | 06:22 17:38-17:56/18<br>18:24  | 06:00 19:14-19:33/16<br>20:28 | 04:53 20:11-20:37/26<br>21:29               | 04:23 20:11-20:37/26<br>22:07 |
| 20                          | 08:33 09:22-09:41/19<br>16:18 | 07:31 08:42-09:25/43<br>17:26                | 06:19 17:37-17:57/20<br>18:26  | 05:57 19:52-19:57/5<br>20:30  | 04:52 20:11-20:37/26<br>21:31               | 04:23 20:11-20:37/26<br>22:07 |
| 21                          | 08:31 09:24-09:42/18<br>16:20 | 07:29 08:43-09:26/43<br>17:28                | 06:16 17:37-17:56/19<br>18:28  | 05:55 19:48-20:01/13<br>20:32 | 04:50 20:10-20:36/26<br>21:32               | 04:24 20:10-20:36/26<br>22:08 |
| 22                          | 08:30 09:24-09:42/18<br>16:22 | 07:26 08:42-09:25/43 07:53-07:56/3<br>17:30  | 06:13 17:36-17:55/19<br>18:30 17:56-18:01/5                                | 05:52 19:46-20:03/17<br>20:35 | 04:48 20:11-20:36/25<br>21:34               | 04:24 20:11-20:36/25<br>22:08 |
| 23                          | 08:28 09:25-09:41/16<br>16:24 | 07:24 08:43-09:25/42<br>17:32                | 06:11 17:37-18:04/27<br>18:32  | 05:50 19:44-20:05/21<br>20:37 | 04:47 20:12-20:36/24<br>21:36               | 04:24 20:12-20:36/24<br>22:08 |
| 24                          | 08:27 09:26-09:40/14<br>16:26 | 07:21 08:43-09:24/41<br>17:35                | 06:08 17:37-18:06/29<br>18:34  | 05:47 19:43-20:08/25<br>20:39 | 04:45 20:12-20:35/23<br>21:38               | 04:24 20:12-20:35/23<br>22:08 |
| 25                          | 08:25 09:27-09:39/12<br>16:28 | 07:19 17:00-17:07/7 07:45-08:27/42<br>17:37  | 06:05 17:38-18:07/29<br>18:36  | 05:45 19:42-20:10/28<br>20:41 | 04:43 20:13-20:35/22<br>21:39               | 04:25 20:13-20:35/22<br>22:08 |
| 26                          | 08:23 09:30-09:38/8<br>16:30  | 07:16 16:58-17:10/12 07:44-08:27/43<br>17:39 | 06:03 17:40-18:08/28<br>18:38  | 05:42 19:41-20:11/30<br>20:43 | 04:42 20:14-20:35/21<br>21:41               | 04:25 20:14-20:35/21<br>22:08 |
| 27                          | 08:22 16:32                   | 07:14 16:55-17:12/17 07:43-08:26/43<br>17:41 | 06:00 17:45-18:08/23<br>18:41  | 05:40 19:40-20:13/33<br>20:45 | 04:41 20:14-20:35/21<br>21:43               | 04:26 20:14-20:35/21<br>22:08 |
| 28                          | 08:20 16:35                   | 07:11 16:54-17:13/19 08:05-08:26/21<br>17:43 | 05:57 18:10-18:14/4<br>18:43   | 05:38 19:40-20:15/35<br>20:47 | 04:39 20:14-20:33/19<br>21:44               | 04:26 20:14-20:33/19<br>22:08 |
| 29                          | 08:18 16:37                   | 07:08 16:53-17:11/16 08:04-08:25/22<br>17:40 | 06:55 18:45-19:17/32<br>19:45  | 05:35 19:40-20:15/35<br>20:49 | 04:38 20:15-20:33/18<br>21:46               | 04:27 20:15-20:33/18<br>22:07 |
| 30                          | 08:16 16:39                   | 07:06 16:52-17:10/15 08:03-08:24/21<br>17:42 | 06:52 18:44-19:18/34<br>19:47  | 05:33 19:39-20:14/35<br>20:51 | 04:37 20:16-20:32/16<br>21:47               | 04:28 20:16-20:32/16<br>22:07 |
| 31                          | 08:14 16:41                   | 07:04 16:51-17:10/14 08:02-08:23/20<br>17:41 | 06:49 18:43-19:20/37<br>19:49  | 05:31 19:38-20:13/34<br>20:50 | 04:35 20:17-20:32/15<br>21:49               | 04:27 20:17-20:32/15<br>22:07 |
| Potential sun hours         | 236                           | 266  | 366  | 426                           | 507   | 528                           |
| Sum of minutes with flicker | 365                           | 1326   | 1448   | 718                           | 855   | 28                            |

Table 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B  
Assumptions for shadow calculations

WTG: Pr25 - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 m) (33)  
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<br>22:07                | 05:14 20:21-20:46/25<br>21:26                | 06:15 19:15-19:35/20<br>20:12                               | 07:15 17:53-18:14/21<br>18:52 08:16-08:44/28                               | 07:20 08:18-08:50/32<br>16:34 | 08:22 09:02-09:20/18<br>15:43 |
| 2                           | 04:29<br>22:06                | 05:16 19:59-20:05/6<br>21:24 20:22-20:45/23  | 06:17 19:10-19:35/25<br>20:09                               | 07:17 17:53-18:14/21 08:15-08:45/30<br>18:49 17:39-17:42/3                 | 07:23 08:19-08:48/29<br>16:32 | 08:24 09:03-09:20/17<br>15:42 |
| 3                           | 04:30<br>22:06                | 05:18 19:56-20:08/12<br>21:21 20:23-20:45/22 | 06:19 19:08-19:35/27<br>20:07                               | 07:19 17:53-18:13/20 08:14-08:45/31<br>18:46 17:34-17:46/12                | 07:25 08:21-08:46/25<br>16:30 | 08:25 09:05-09:20/15<br>15:41 |
| 4                           | 04:31<br>22:05                | 05:20 19:55-20:10/15<br>21:19 20:24-20:44/20 | 06:21 19:06-19:34/28<br>20:04                               | 07:21 17:53-18:13/20 08:14-08:44/30<br>18:44 17:32-17:48/16                | 07:27 08:23-08:44/21<br>16:28 | 08:27 09:07-09:20/13<br>15:41 |
| 5                           | 04:32<br>22:04                | 05:22 19:53-20:17/24<br>21:17 20:25-20:43/18 | 06:23 19:02-19:31/29<br>20:01                               | 07:23 17:53-18:10/17 08:13-08:44/31<br>18:41 17:30-17:49/19                | 07:29 08:26-08:41/15<br>16:25 | 08:28 09:09-09:20/11<br>15:40 |
| 6                           | 04:33<br>22:04                | 05:23 19:51-20:19/28<br>21:15 20:26-20:41/15 | 06:25 19:00-19:28/28<br>19:59 18:46-18:53/7                 | 07:25 17:53-18:07/14 08:13-08:44/31<br>18:38 17:29-17:49/20                | 07:31 08:31-08:37/6<br>16:23  | 08:30 09:11-09:21/10<br>15:39 |
| 7                           | 04:34<br>22:03                | 05:25 19:51-20:21/30<br>21:13 20:28-20:39/11 | 06:27 18:59-19:25/26<br>19:56 18:43-18:56/13                | 07:27 17:54-18:05/11 08:13-08:43/30<br>18:36 17:27-17:49/22                | 07:33<br>16:21                | 08:31 09:12-09:20/8<br>15:39  |
| 8                           | 04:35<br>22:02                | 05:27 19:50-20:22/32<br>21:11 20:32-20:35/3  | 06:29 18:58-19:23/25<br>19:53 18:40-18:57/17                | 07:29 17:56-18:02/6 09:29-09:44/15<br>18:33 17:27-17:49/22 08:13-08:42/29  | 07:36<br>16:19                | 08:33 09:14-09:20/6<br>15:38  |
| 9                           | 04:36 20:31-20:34/3<br>22:01  | 05:29 19:49-20:23/34<br>21:08                | 06:31 18:39-19:20/41<br>19:51                               | 07:32 17:26-17:49/23 08:14-08:42/28<br>18:30 09:25-09:47/22                | 07:38<br>16:17                | 08:34 09:15-09:19/4<br>15:37  |
| 10                          | 04:38 20:28-20:36/8<br>22:00  | 05:31 19:49-20:23/34<br>21:06                | 06:33 18:37-19:18/41<br>19:48                               | 07:34 17:26-17:49/23 08:47-08:51/4<br>18:28 09:24-09:50/26 08:14-08:41/27  | 07:40<br>16:15                | 08:36 09:17-09:20/3<br>15:37  |
| 11                          | 04:39 20:28-20:39/11<br>21:59 | 05:33 19:48-20:23/35<br>21:04                | 06:35 18:37-19:15/38<br>19:45                               | 07:36 17:26-17:49/23 08:42-08:55/13<br>18:25 09:21-09:51/30 08:15-08:40/25 | 07:42<br>16:13                | 08:37 09:18-09:19/1<br>15:37  |
| 12                          | 04:40 20:26-20:40/14<br>21:58 | 05:35 19:48-20:23/35<br>21:02                | 06:37 18:36-19:13/37<br>19:43                               | 07:38 17:26-17:48/22 08:40-08:56/16<br>18:23 09:20-09:52/32 08:16-08:38/22 | 07:44<br>16:11                | 08:38<br>15:36                |
| 13                          | 04:42 20:25-20:41/16<br>21:57 | 05:37 19:48-20:23/35<br>20:59                | 06:39 18:35-19:10/35<br>19:40                               | 07:40 17:27-17:47/20 08:38-08:58/20<br>18:20 09:18-09:53/35 08:16-08:36/20 | 07:46<br>16:09                | 08:39<br>15:36                |
| 14                          | 04:43 20:24-20:41/17<br>21:56 | 05:39 19:48-20:23/35<br>20:57                | 06:41 18:35-19:07/32<br>19:37                               | 07:42 17:27-17:46/19 08:36-08:58/22<br>18:18 09:17-09:54/37 08:15-08:35/20 | 07:48<br>16:08                | 08:40<br>15:36                |
| 15                          | 04:45 20:24-20:43/19<br>21:54 | 05:41 19:48-20:22/34<br>20:55                | 06:43 19:00-19:05/5<br>19:35 18:35-18:59/24                 | 07:44 17:28-17:43/15 08:16-08:59/43<br>18:15 09:16-09:55/39                | 07:51<br>16:06                | 08:41<br>15:36                |
| 16                          | 04:46 20:23-20:43/20<br>21:53 | 05:43 19:48-20:20/32<br>20:52                | 06:45 18:35-18:58/23<br>19:32                               | 07:46 17:31-17:41/10 08:16-09:00/44<br>18:12 09:15-09:56/41                | 07:53 09:03-09:11/8<br>16:04  | 08:42<br>15:36                |
| 17                          | 04:48 20:23-20:43/20<br>21:52 | 05:45 19:48-20:18/30<br>20:50                | 06:47 18:29-18:57/28<br>19:29                               | 07:48 17:34-17:38/4 08:18-08:59/41<br>18:10 09:14-09:56/42                 | 07:55 09:01-09:13/12<br>16:02 | 08:43<br>15:36                |
| 18                          | 04:49 20:23-20:45/22<br>21:50 | 05:47 19:48-20:15/27<br>20:47                | 06:49 18:26-18:56/30<br>19:27                               | 07:50 09:14-09:56/42<br>18:07 08:20-08:59/39                               | 07:57 09:00-09:14/14<br>16:01 | 08:44<br>15:36                |
| 19                          | 04:51 20:22-20:45/23<br>21:49 | 05:49 19:49-20:13/24<br>20:45                | 06:51 18:24-18:53/29<br>19:24                               | 07:52 09:13-09:56/43 08:23-08:30/7<br>18:05 08:31-09:00/29                 | 07:59 09:00-09:16/16<br>15:59 | 08:45<br>15:37                |
| 20                          | 04:52 20:22-20:46/24<br>21:47 | 05:51 19:50-20:11/21<br>20:42                | 06:53 18:23-18:50/27<br>19:21                               | 07:55 09:13-09:56/43<br>18:02 08:31-08:59/28                               | 08:01 08:59-09:17/18<br>15:57 | 08:46<br>15:37                |
| 21                          | 04:54 20:21-20:46/25<br>21:46 | 05:53 19:51-20:07/16<br>20:40                | 06:55 18:22-18:48/26<br>19:18                               | 07:57 09:13-09:56/43<br>18:00 08:31-08:58/27                               | 08:03 08:59-09:17/18<br>15:56 | 08:46<br>15:37                |
| 22                          | 04:56 20:21-20:46/25<br>21:44 | 05:55 19:53-20:05/12<br>20:37                | 06:57 18:21-18:41/20<br>19:16                               | 07:59 09:12-09:56/44<br>17:58 08:31-08:57/26                               | 08:05 09:00-09:18/18<br>15:54 | 08:47<br>15:38                |
| 23                          | 04:57 20:21-20:46/25<br>21:42 | 05:57 19:58-20:00/2<br>20:35                 | 06:59 18:21-18:41/20<br>19:13                               | 08:01 09:13-09:56/43<br>17:55 08:32-08:57/25                               | 08:07 08:59-09:19/20<br>15:53 | 08:47<br>15:38                |
| 24                          | 04:59 20:21-20:47/26<br>21:41 | 05:59<br>20:32                               | 07:01 18:21-18:40/19<br>19:10                               | 08:03 09:13-09:55/42<br>17:53 08:34-08:55/21                               | 08:09 08:59-09:19/20<br>15:51 | 08:48<br>15:39                |
| 25                          | 05:01 20:21-20:47/26<br>21:39 | 06:01<br>20:30                               | 07:03 18:21-18:37/16<br>19:08                               | 07:05 08:13-08:55/42<br>16:50 07:36-07:53/17                               | 08:11 08:59-09:19/20<br>15:50 | 08:48<br>15:39                |
| 26                          | 05:03 20:20-20:47/27<br>21:37 | 06:03<br>20:27                               | 07:05 18:00-18:10/10 08:26-08:38/12<br>19:05 18:21-18:34/13 | 07:07 17:57-18:11/14 08:23-08:41/18<br>16:48 07:39-07:51/12                | 08:13 08:59-09:19/20<br>15:49 | 08:48<br>15:40                |
| 27                          | 05:05 20:21-20:47/26<br>21:35 | 06:05 19:21-19:31/10<br>20:25                | 07:07 17:57-18:11/14 08:23-08:41/18<br>19:02 18:22-18:31/9  | 07:10 08:14-08:54/40<br>16:46  | 08:15 09:00-09:19/19<br>15:48 | 08:48<br>15:41                |
| 28                          | 05:06 20:21-20:48/27<br>21:33 | 06:07 19:19-19:32/13<br>20:22                | 07:09 17:56-18:12/16 08:20-08:42/22<br>19:00 18:24-18:29/5  | 07:12 08:14-08:53/39<br>16:43  | 08:17 09:00-09:19/19<br>15:46 | 08:49<br>15:42                |
| 29                          | 05:08 20:21-20:47/26<br>21:31 | 06:09 19:17-19:34/17<br>20:20                | 07:11 17:54-18:13/19<br>18:57 08:19-08:43/24                | 07:14 08:15-08:53/38<br>16:41  | 08:18 09:01-09:21/20<br>15:45 | 08:49<br>15:43                |
| 30                          | 05:10 20:21-20:47/26<br>21:30 | 06:11 19:16-19:34/18<br>20:17                | 07:13 17:53-18:13/20<br>18:54 08:17-08:44/27                | 07:16 08:16-08:51/35<br>16:39  | 08:20 09:02-09:21/19<br>15:44 | 08:49<br>15:44                |
| 31                          | 05:12 20:22-20:47/25<br>21:28 | 06:13 19:15-19:35/20<br>20:14                |   | 07:18 08:16-08:50/34<br>16:36  |                               | 08:49<br>15:45                |
| Potential sun hours         | 529                           | 469  | 384   | 324  | 248                           | 217                           |
| Sum of minutes with flicker | 481                           | 768  | 945   | 2107   | 389                           | 106                           |

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

| Day in month | Sun rise (hh:mm)<br>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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: Pr3b - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 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<br>15:46                               | 08:12 15:25-15:51/26<br>16:43 08:59-09:24/25                             | 07:09 16:24-17:11/47<br>17:46               | 06:47 18:22-19:00/38<br>19:51                               | 05:31 18:59-19:38/39<br>20:53 | 04:34 20:56-21:12/16<br>21:50 |
| 2                           | 08:48<br>15:48                               | 08:11 15:26-15:51/25<br>16:46 08:59-09:25/26                             | 07:06 16:24-17:10/46<br>17:48               | 06:44 18:21-18:59/38<br>19:53                               | 05:28 19:00-19:37/37<br>20:55 | 04:33 20:55-21:13/18<br>21:52 |
| 3                           | 08:48<br>15:49                               | 08:09 16:09-16:14/5 08:59-09:25/26<br>16:48 15:26-15:51/25               | 07:04 17:16-17:20/4 16:53-17:09/16<br>17:50 | 06:41 18:20-18:59/39<br>19:55 19:17-19:22/5                 | 05:26 19:00-19:37/37<br>20:57 | 04:32 20:55-21:14/19<br>21:53 |
| 4                           | 08:47<br>15:50                               | 08:07 16:05-16:16/11 09:00-09:25/25<br>16:50 15:26-15:50/24              | 07:01 17:14-17:23/9 16:55-17:08/13<br>17:52 | 06:39 18:21-18:59/38<br>19:57 19:13-19:26/13                | 05:24 19:01-19:36/35<br>20:59 | 04:31 20:56-21:16/20<br>21:54 |
| 5                           | 08:47<br>15:52                               | 08:05 16:04-16:18/14 08:59-09:24/25<br>16:52 15:27-15:50/23              | 06:58 17:12-17:25/13 16:56-17:05/9<br>17:54 | 06:36 18:20-18:58/38<br>19:59 19:10-19:28/18                | 05:22 19:02-19:35/33<br>21:01 | 04:30 20:55-21:16/21<br>21:55 |
| 6                           | 08:46<br>15:53                               | 08:02 16:03-16:21/18 09:00-09:24/24<br>16:54 15:28-15:50/22              | 06:56 17:11-17:27/16<br>17:56               | 06:33 18:21-18:58/37<br>20:01 19:09-19:30/21                | 05:19 19:03-19:35/32<br>21:03 | 04:29 20:55-21:16/21<br>21:57 |
| 7                           | 08:46<br>15:55                               | 08:00 16:02-16:22/20 09:01-09:24/23<br>16:57 15:29-15:49/20              | 06:53 17:10-17:30/20<br>17:58               | 06:31 18:20-18:57/37<br>20:03 19:07-19:30/23                | 05:17 19:04-19:34/30<br>21:05 | 04:28 20:55-21:17/22<br>21:58 |
| 8                           | 08:45<br>15:56                               | 07:58 16:01-16:23/22 09:02-09:23/21<br>16:59 15:30-15:47/17              | 06:51 17:09-17:32/23<br>18:01               | 06:28 18:20-18:56/36<br>20:05 19:05-19:30/25                | 05:15 19:05-19:32/27<br>21:07 | 04:28 20:55-21:17/22<br>21:59 |
| 9                           | 08:44<br>15:58                               | 07:56 16:01-16:24/23 09:03-09:22/19<br>17:01 15:32-15:46/14              | 06:48 17:08-17:33/25<br>18:03               | 06:26 18:21-18:56/35<br>20:07 19:05-19:31/26                | 05:13 19:06-19:31/25<br>21:09 | 04:27 20:54-21:17/23<br>22:00 |
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| 11                          | 08:43<br>16:01                               | 07:52 16:00-16:24/24 08:20-08:29/9<br>17:06 09:06-09:18/12               | 06:43 17:07-17:38/31<br>18:07               | 06:20 18:23-18:54/31<br>20:12 19:04-19:31/27                | 05:09 19:09-19:27/18<br>21:13 | 04:26 20:55-21:19/24<br>22:02 |
| 12                          | 08:42<br>16:03                               | 07:50 16:01-16:24/23 08:18-08:31/13<br>17:08 09:11-09:14/3               | 06:40 17:07-17:40/33<br>18:09               | 06:18 18:23-18:52/29 19:40-19:44/4<br>20:14 19:03-19:31/28  | 05:07 19:12-19:25/13<br>21:15 | 04:25 20:55-21:18/23<br>22:03 |
| 13                          | 08:41<br>16:04                               | 07:47 16:00-16:24/24<br>17:10 08:16-08:33/17                             | 06:37 17:07-17:43/36<br>18:11               | 06:15 18:25-18:51/26 19:38-19:47/9<br>20:16 19:04-19:32/28  | 05:05 19:18-19:20/2<br>21:17  | 04:25 20:55-21:19/24<br>22:03 |
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| 16                          | 08:38<br>16:10                               | 07:40 16:02-16:23/21 08:13-08:34/21<br>17:17 16:42-16:46/4               | 06:29 17:09-17:50/41<br>18:18               | 06:07 18:32-18:41/9<br>20:22 19:04-19:52/48                 | 04:59<br>21:23                | 04:24 20:55-21:19/24<br>22:05 |
| 17                          | 08:36<br>16:12                               | 07:38 16:03-16:22/19 08:14-08:35/21<br>17:19 16:39-16:48/9               | 06:27 17:11-17:52/41<br>18:20               | 06:05 19:05-19:53/48<br>20:24                               | 04:57<br>21:25                | 04:24 20:55-21:20/25<br>22:06 |
| 18                          | 08:35<br>16:14                               | 07:36 16:04-16:20/16 08:13-08:34/21<br>17:21 16:35-16:50/15              | 06:24 17:12-17:53/41<br>18:22               | 06:02 19:04-19:53/49<br>20:26                               | 04:55<br>21:27                | 04:23 20:55-21:20/25<br>22:06 |
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| 24                          | 08:26 15:26-15:46/20<br>16:26 09:02-09:17/15 | 07:21 16:25-17:05/40<br>17:35 08:20-08:27/7                              | 06:08 17:18-17:59/41<br>18:34               | 05:47 18:59-19:44/45<br>20:39                               | 04:45<br>21:38                | 04:24 20:58-21:22/24<br>22:08 |
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| 28                          | 08:20 15:25-15:49/24<br>16:35 09:00-09:23/23 | 07:11 16:23-17:11/48<br>17:43  | 05:57 17:25-17:58/33<br>18:43               | 05:38 18:59-19:40/41<br>20:47                               | 04:39 20:59-21:06/7<br>21:44  | 04:26 20:59-21:23/24<br>22:08 |
| 29                          | 08:18 15:25-15:50/25<br>16:37 08:59-09:22/23 |  | 06:55 18:25-18:59/34<br>19:45               | 05:35 18:59-19:39/40<br>20:49                               | 04:38 20:58-21:08/10<br>21:46 | 04:27 20:58-21:22/24<br>22:07 |
| 30                          | 08:16 15:25-15:50/25<br>16:39 08:58-09:23/25 |  | 06:52 18:23-18:59/36<br>19:47               | 05:33 18:59-19:38/39<br>20:51                               | 04:37 20:57-21:09/12<br>21:47 | 04:28 20:59-21:23/24<br>22:07 |
| 31                          | 08:14 15:25-15:50/25<br>16:41 08:58-09:24/26 |  | 06:49 18:22-18:59/37<br>19:49               |   | 04:35 20:57-21:10/13<br>21:49 |                               |
| Potential sun hours         | 236  | 266  | 366   | 426   | 507                           | 528                           |
| Sum of minutes with flicker | 429  | 1400   | 1205  | 1524  | 395                           | 687                           |

Table 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 |
|--------------|------------------|---------------------------------|--------------------------------|----------------------|
|--------------|------------------|---------------------------------|--------------------------------|----------------------|

Project:

Flickering\_Vestas\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: Pr3b - VESTAS V162-6.2 6200 162.0 !OI hub: 166,0 m (TOT: 247,0 m) (36)  
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 0,59No 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 20:59-21:23/24<br>22:07 | 05:14 19:21-19:36/15<br>21:26                               | 06:15 18:22-18:53/31<br>20:12 19:03-19:30/27 | 07:15 17:47-18:21/34<br>18:52                               | 07:20 15:31-15:54/23 08:34-08:51/17<br>16:34 15:04-15:14/10 07:53-07:55/2 | 08:22<br>15:43 |
| 2                           | 04:29 20:59-21:22/23<br>22:06 | 05:16 19:19-19:38/19<br>21:24                               | 06:17 18:20-18:53/33<br>20:09 19:03-19:30/27 | 07:17 17:46-18:18/32<br>18:49                               | 07:23 15:31-15:53/22 08:32-08:52/20<br>16:32 15:01-15:16/15               | 08:24<br>15:42 |
| 3                           | 04:30 21:00-21:22/22<br>22:06 | 05:18 19:17-19:40/23<br>21:21                               | 06:19 18:19-18:54/35<br>20:07 19:03-19:29/26 | 07:19 17:46-18:15/29<br>18:46                               | 07:25 15:31-15:52/21 08:31-08:52/21<br>16:30 14:59-15:17/18               | 08:25<br>15:41 |
| 4                           | 04:31 21:00-21:23/23<br>22:05 | 05:20 19:16-19:42/26<br>21:19                               | 06:21 18:18-18:54/36<br>20:04 19:04-19:28/24 | 07:21 17:46-18:12/26<br>18:44                               | 07:27 15:32-15:52/20 08:31-08:54/23<br>16:28 14:59-15:19/20               | 08:27<br>15:41 |
| 5                           | 04:32 21:00-21:23/23<br>22:04 | 05:22 19:15-19:43/28<br>21:17                               | 06:23 18:17-18:54/37<br>20:01 19:03-19:26/23 | 07:23 17:46-18:10/24<br>18:41 17:08-17:20/12                | 07:29 15:33-15:50/17 08:30-08:54/24<br>16:25 14:58-15:19/21               | 08:28<br>15:40 |
| 6                           | 04:33 21:01-21:23/22<br>22:04 | 05:23 19:12-19:43/31<br>21:15                               | 06:25 18:16-18:54/38<br>19:59 19:04-19:25/21 | 07:25 17:46-18:07/21<br>18:38 17:05-17:23/18                | 07:31 15:35-15:49/14 08:30-08:55/25<br>16:23 14:58-15:21/23               | 08:30<br>15:39 |
| 7                           | 04:34 21:01-21:22/21<br>22:03 | 05:25 19:12-19:44/32<br>21:13                               | 06:27 18:15-18:54/39<br>19:56 19:05-19:23/18 | 07:27 17:46-18:05/19<br>18:36 17:03-17:24/21                | 07:33 15:36-15:46/10 08:29-08:55/26<br>16:21 14:57-15:21/24               | 08:31<br>15:39 |
| 8                           | 04:35 21:02-21:22/20<br>22:02 | 05:27 19:11-19:45/34<br>21:11                               | 06:29 18:15-18:53/38<br>19:53 19:07-19:21/14 | 07:29 17:47-18:02/15 17:34-17:39/5<br>18:33 17:01-17:25/24  | 07:36 15:39-15:43/4 08:29-08:55/26<br>16:19 14:56-15:21/25                | 08:33<br>15:38 |
| 9                           | 04:36 21:02-21:22/20<br>22:01 | 05:29 19:10-19:46/36<br>21:08                               | 06:31 18:15-18:53/38<br>19:51 19:10-19:17/7  | 07:32 17:47-17:59/11 17:30-17:41/11<br>18:30 17:00-17:25/25 | 07:38 14:56-15:22/26<br>16:17 08:30-08:55/25                              | 08:34<br>15:37 |
| 10                          | 04:38 21:03-21:21/18<br>22:00 | 05:31 19:09-19:46/37<br>21:06                               | 06:33 18:14-18:53/39<br>19:48                | 07:34 17:49-17:56/7 17:28-17:42/14<br>18:28 16:58-17:26/28  | 07:40 14:56-15:22/26<br>16:15 08:29-08:55/26                              | 08:36<br>15:37 |
| 11                          | 04:39 21:04-21:21/17<br>21:59 | 05:33 19:08-19:46/38<br>21:04                               | 06:35 18:14-18:52/38<br>19:45                | 07:36 17:53-17:54/1 17:28-17:44/16<br>18:25 16:58-17:27/29  | 07:42 14:57-15:22/25<br>16:13 08:30-08:55/25                              | 08:37<br>15:37 |
| 12                          | 04:40 21:05-21:19/14<br>21:58 | 05:35 19:07-19:46/39<br>21:02                               | 06:37 18:14-18:51/37<br>19:43                | 07:38 16:57-17:44/47<br>18:23                               | 07:44 14:57-15:22/25<br>16:11 08:30-08:55/25                              | 08:38<br>15:36 |
| 13                          | 04:42 21:05-21:18/13<br>21:57 | 05:37 19:07-19:47/40<br>20:59                               | 06:39 18:15-18:51/36<br>19:40                | 07:40 16:57-17:44/47<br>18:20                               | 07:46 14:57-15:21/24<br>16:09 08:31-08:54/23                              | 08:39<br>15:36 |
| 14                          | 04:43 21:06-21:17/11<br>21:55 | 05:39 19:07-19:47/40<br>20:57                               | 06:41 18:15-18:50/35<br>19:37                | 07:42 16:56-17:44/48<br>18:18                               | 07:48 14:58-15:22/24<br>16:08 08:32-08:54/22                              | 08:40<br>15:36 |
| 15                          | 04:45 21:08-21:16/8<br>21:54  | 05:41 19:06-19:47/41<br>20:55                               | 06:43 18:15-18:48/33<br>19:35                | 07:44 16:56-17:43/47<br>18:15                               | 07:51 14:58-15:21/23<br>16:06 08:32-08:54/22                              | 08:41<br>15:36 |
| 16                          | 04:46 21:10-21:15/5<br>21:53  | 05:43 19:06-19:47/41<br>20:52                               | 06:45 18:16-18:47/31<br>19:32                | 07:46 16:57-17:41/44<br>18:12                               | 07:53 14:58-15:21/23<br>16:04 08:34-08:54/20                              | 08:42<br>15:36 |
| 17                          | 04:48<br>21:51                | 05:45 19:06-19:47/41<br>20:50                               | 06:47 18:17-18:47/30<br>19:29                | 07:48 16:57-17:38/41<br>18:10                               | 07:55 15:00-15:21/21<br>16:02 08:35-08:52/17                              | 08:43<br>15:36 |
| 18                          | 04:49<br>21:50                | 05:47 19:05-19:46/41<br>20:47                               | 06:49 18:08-18:46/38<br>19:26                | 07:50 16:57-17:35/38<br>18:07 08:50-09:00/10                | 07:57 15:00-15:20/20<br>16:01 08:36-08:51/15                              | 08:44<br>15:36 |
| 19                          | 04:51<br>21:49                | 05:49 19:05-19:51/46<br>20:45                               | 06:51 18:06-18:45/39<br>19:24                | 07:52 16:57-17:26/29 08:47-09:01/14<br>18:05 17:28-17:32/4  | 07:59 15:01-15:19/18<br>15:59 08:39-08:50/11                              | 08:45<br>15:37 |
| 20                          | 04:52<br>21:47                | 05:51 19:05-19:53/48<br>20:42                               | 06:53 18:04-18:45/41<br>19:21                | 07:54 16:59-17:27/28<br>18:02 08:46-09:03/17                | 08:01 15:03-15:19/16<br>15:57 08:41-08:48/7                               | 08:45<br>15:37 |
| 21                          | 04:54<br>21:46                | 05:53 19:05-19:55/50<br>20:40                               | 06:55 18:02-18:44/42<br>19:18                | 07:57 16:59-17:26/27<br>18:00 08:45-09:04/19                | 08:03 15:05-15:17/12<br>15:56   | 08:46<br>15:37 |
| 22                          | 04:56<br>21:44                | 05:55 19:06-19:56/50<br>20:37                               | 06:57 18:01-18:44/43<br>19:16                | 07:59 16:39-16:46/7 08:44-09:04/20<br>17:58 17:01-17:25/24  | 08:05 15:07-15:15/8<br>15:54  | 08:47<br>15:38 |
| 23                          | 04:57<br>21:42                | 05:57 19:06-19:56/50<br>20:35                               | 06:59 18:00-18:42/42<br>19:13                | 08:01 16:35-16:49/14 08:44-09:05/21<br>17:55 17:02-17:22/20 | 08:07<br>15:53  | 08:47<br>15:38 |
| 24                          | 04:59<br>21:41                | 05:59 19:07-19:56/49<br>20:32                               | 07:01 17:57-18:40/43<br>19:10                | 08:03 16:34-16:51/17 08:44-09:05/21<br>17:53 17:07-17:20/13 | 08:09<br>15:51  | 08:48<br>15:39 |
| 25                          | 05:01<br>21:39                | 06:01 19:07-19:56/49<br>20:30                               | 07:03 17:55-18:37/42<br>19:08                | 07:05 15:32-15:52/20 07:43-08:04/21<br>16:50 16:09-16:17/8  | 08:11<br>15:50  | 08:48<br>15:39 |
| 26                          | 05:03<br>21:37                | 06:03 19:06-19:55/49<br>20:27                               | 07:05 17:53-18:34/41<br>19:05                | 07:07 15:31-15:52/21<br>16:48 07:44-08:05/21                | 08:13<br>15:49  | 08:48<br>15:40 |
| 27                          | 05:05<br>21:35                | 06:05 18:33-18:44/11<br>20:25 19:05-19:54/49                | 07:07 17:51-18:31/40<br>19:02                | 07:09 15:31-15:53/22<br>16:46 07:44-08:04/20                | 08:15<br>15:48  | 08:48<br>15:41 |
| 28                          | 05:06<br>21:33                | 06:07 18:29-18:47/18 19:37-19:51/14<br>20:22 19:05-19:36/31 | 07:09 17:49-18:29/40<br>19:00                | 07:12 15:30-15:53/23<br>16:43 07:44-08:03/19                | 08:16<br>15:46  | 08:49<br>15:42 |
| 29                          | 05:08<br>21:31                | 06:09 18:27-18:49/22 19:37-19:49/12<br>20:20 19:04-19:34/30 | 07:11 17:48-18:26/38<br>18:57                | 07:14 15:30-15:53/23<br>16:41 07:46-08:02/16                | 08:18<br>15:45  | 08:49<br>15:43 |
| 30                          | 05:10<br>21:30                | 06:11 18:25-18:51/26 19:38-19:46/8<br>20:17 19:03-19:31/28  | 07:13 17:47-18:23/36<br>18:54                | 07:16 15:30-15:54/24 07:48-08:01/13<br>16:39 08:39-08:45/6  | 08:20<br>15:44  | 08:49<br>15:44 |
| 31                          | 05:12 19:25-19:33/8<br>21:28  | 06:13 18:23-18:52/29 19:40-19:44/4<br>20:14 19:03-19:31/28  |  | 07:18 15:30-15:53/23 07:50-07:58/8<br>16:36 08:35-08:48/13  |   | 08:48<br>15:45 |
| Potential sun hours         | 529                           | 469   | 384  | 324   | 248   | 217            |
| Sum of minutes with flicker | 292                           | 1303  | 1316   | 1340  | 1000  | 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: PrRR3 - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 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 09:44-10:36/52<br>15:46                | 08:12 15:59-16:08/9<br>16:43  | 07:09 17:07-17:17/10 15:59-16:13/14<br>17:46 16:31-17:01/30 07:53-08:19/26 | 06:47 18:07-19:20/73<br>19:51                             | 05:31 20:02-20:21/19<br>20:53               | 04:34 19:47-20:35/48<br>21:50 |
| 2                           | 08:48 09:44-10:35/51<br>15:48                | 08:11 15:58-16:11/13<br>16:46   | 07:06 17:05-17:18/13 07:53-08:18/25<br>17:48 16:30-17:01/31                | 06:44 18:07-19:20/73<br>19:53                             | 05:28 20:02-20:22/20<br>20:55               | 04:33 19:47-20:34/47<br>21:52 |
| 3                           | 08:48 09:45-10:24/39<br>15:49 10:25-10:35/10 | 08:09 15:58-16:14/16<br>16:48   | 07:04 17:03-17:20/17 07:54-08:18/24<br>17:50 16:30-17:00/30                | 06:41 18:45-19:25/40<br>19:55 18:07-18:44/37              | 05:26 20:02-20:22/20<br>20:57               | 04:32 19:47-20:34/47<br>21:53 |
| 4                           | 08:47 09:46-10:24/38<br>15:50 10:26-10:34/8  | 08:07 15:57-16:15/18<br>16:50   | 07:01 17:03-17:23/20 07:54-08:17/23<br>17:52 16:30-17:01/31 07:27-07:36/9  | 06:39 18:46-19:29/43<br>19:57 18:08-18:44/36              | 05:24 20:02-20:21/19<br>20:59 20:22-20:27/5 | 04:31 19:48-20:35/47<br>21:54 |
| 5                           | 08:47 09:46-10:24/38<br>15:52 10:27-10:33/6  | 08:05 15:57-16:16/19<br>16:52   | 06:58 17:02-17:24/22 07:54-08:15/21<br>17:54 16:30-17:00/30 07:24-07:37/13 | 06:36 18:47-19:30/43<br>19:59 18:08-18:42/34              | 05:22 20:03-20:29/26<br>21:01               | 04:30 19:48-20:35/47<br>21:55 |
| 6                           | 08:46 09:47-10:25/38<br>15:53                | 08:02 15:57-16:17/20<br>16:54   | 06:56 17:01-17:24/23 07:56-08:14/18<br>17:56 16:31-17:00/29 07:22-07:39/17 | 06:33 18:48-19:33/45<br>20:01 18:09-18:42/33              | 05:19 20:03-20:31/28<br>21:03               | 04:29 19:47-20:35/48<br>21:57 |
| 7                           | 08:46 09:48-10:25/37<br>15:55                | 08:00 15:58-16:17/19<br>16:57   | 06:53 17:02-17:24/22 07:58-08:12/14<br>17:58 16:31-16:59/28 07:20-07:39/19 | 06:31 18:47-19:33/46<br>20:03 18:10-18:40/30              | 05:17 20:04-20:32/28<br>21:05               | 04:28 19:48-20:36/48<br>21:58 |
| 8                           | 08:45 10:08-10:24/16<br>15:56 09:48-10:07/19 | 07:58 15:57-16:16/19<br>16:59   | 06:51 17:01-17:29/28 08:01-08:07/6<br>18:01 16:31-16:57/26 07:19-07:39/20  | 06:28 18:47-19:33/46<br>20:05 18:10-18:38/28              | 05:15 20:04-20:34/30<br>21:07               | 04:27 19:48-20:36/48<br>21:59 |
| 9                           | 08:44 10:09-10:24/15<br>15:58 09:49-10:07/18 | 07:56 15:55-16:17/22<br>17:01   | 06:48 17:01-17:31/30 07:19-07:40/21<br>18:03 16:32-16:55/23                | 06:26 18:48-19:34/46<br>20:07 18:13-18:37/24              | 05:13 20:05-20:36/31<br>21:09               | 04:26 19:48-20:35/47<br>22:00 |
| 10                          | 08:44 10:10-10:24/14<br>15:59 09:50-10:07/17 | 07:54 15:54-16:19/25<br>17:03   | 06:45 17:03-17:37/34 07:19-07:39/20<br>18:05 16:34-16:54/20                | 06:23 18:49-19:38/49<br>20:10 18:14-18:34/20              | 05:11 20:03-20:37/34<br>21:11               | 04:26 19:48-20:36/48<br>22:01 |
| 11                          | 08:43 10:11-10:22/11<br>16:01 09:50-10:06/16 | 07:52 16:30-16:33/3<br>17:06 15:53-16:20/27                               | 06:43 17:03-17:39/36 07:18-07:38/20<br>18:07 16:36-16:52/16                | 06:20 18:50-19:43/53<br>20:12 18:18-18:31/13              | 05:09 20:00-20:37/37<br>21:13               | 04:26 19:49-20:37/48<br>22:02 |
| 12                          | 08:42 10:13-10:22/9<br>16:03 09:51-10:06/15  | 07:50 16:28-16:36/8<br>17:08 15:52-16:21/29                               | 06:40 17:05-17:40/35 07:19-07:38/19<br>18:09 16:39-16:48/9                 | 06:18 18:52-19:44/52<br>20:14                             | 05:07 19:57-20:37/40<br>21:15               | 04:25 19:48-20:36/48<br>22:03 |
| 13                          | 08:41 10:16-10:20/4<br>16:04 09:53-10:06/13  | 07:47 16:25-16:38/13<br>17:10 15:51-16:21/30                              | 06:37 17:09-17:43/34<br>18:11 07:19-07:37/18                               | 06:15 18:54-19:47/53<br>20:16                             | 05:05 19:56-20:36/40<br>21:17               | 04:25 19:49-20:37/48<br>22:03 |
| 14                          | 08:40 09:54-10:06/12<br>16:06                | 07:45 16:25-16:41/16<br>17:12 15:50-16:22/32                              | 06:35 17:08-17:44/36<br>18:13 07:20-07:35/15                               | 06:13 18:55-19:48/53<br>20:18                             | 05:03 19:55-20:37/42<br>21:19               | 04:24 19:49-20:37/48<br>22:04 |
| 15                          | 08:39 09:55-10:04/9<br>16:08                 | 07:43 16:24-16:44/20<br>17:15 15:50-16:23/33                              | 06:32 17:07-17:44/37<br>18:15 07:22-07:34/12                               | 06:10 18:56-19:51/55<br>20:20                             | 05:01 19:53-20:36/43<br>21:21               | 04:24 19:50-20:38/48<br>22:05 |
| 16                          | 08:38 09:59-10:02/3<br>16:10                 | 07:40 15:49-16:44/55<br>17:17   | 06:29 17:07-17:45/38<br>18:18 07:26-07:29/3                                | 06:07 18:58-19:52/54<br>20:22                             | 04:59 19:52-20:36/44<br>21:23               | 04:24 19:49-20:37/48<br>22:05 |
| 17                          | 08:36<br>16:12                               | 07:38 15:50-16:45/55<br>17:19   | 06:27 17:07-17:44/37<br>18:20  | 06:05 19:03-19:54/51<br>20:24                             | 04:57 19:52-20:36/44<br>21:25               | 04:24 19:49-20:37/48<br>22:06 |
| 18                          | 08:35<br>16:14                               | 07:36 15:49-16:44/55<br>17:21   | 06:24 17:06-17:43/37<br>18:22  | 06:02 19:03-19:56/53<br>20:26                             | 04:55 19:51-20:36/45<br>21:27               | 04:23 19:50-20:37/47<br>22:07 |
| 19                          | 08:34<br>16:16                               | 07:33 15:49-16:45/56<br>17:24   | 06:21 17:07-17:42/35<br>18:24  | 06:00 19:03-19:58/55<br>20:28                             | 04:53 19:49-20:36/47<br>21:29               | 04:23 19:50-20:38/48<br>22:07 |
| 20                          | 08:32<br>16:18                               | 07:31 15:49-16:44/55<br>17:26 08:01-08:12/11                              | 06:19 17:07-17:43/36<br>18:26  | 05:57 19:03-19:58/55<br>20:30                             | 04:52 19:49-20:36/47<br>21:31               | 04:23 19:51-20:39/48<br>22:07 |
| 21                          | 08:31<br>16:20                               | 07:28 15:50-16:52/62<br>17:28 07:59-08:15/16                              | 06:16 17:07-17:44/37<br>18:28  | 05:55 19:04-19:58/54<br>20:32                             | 04:50 19:48-20:36/48<br>21:32               | 04:24 19:51-20:39/48<br>22:08 |
| 22                          | 08:30<br>16:22                               | 07:26 15:50-16:55/65<br>17:30 07:57-08:16/19                              | 06:13 17:56-18:01/5<br>18:30 17:08-17:45/37                                | 05:52 19:05-19:57/52<br>20:34                             | 04:48 19:48-20:36/48<br>21:34               | 04:24 19:51-20:39/48<br>22:08 |
| 23                          | 08:28<br>16:24                               | 07:24 16:24-16:56/32 07:57-08:18/21<br>17:32 15:50-16:22/32               | 06:11 17:53-18:04/11<br>18:32 17:10-17:46/36                               | 05:50 19:05-19:56/51<br>20:37                             | 04:47 19:48-20:37/49<br>21:36               | 04:24 19:51-20:39/48<br>22:08 |
| 24                          | 08:26<br>16:26                               | 07:21 16:26-16:58/32 07:55-08:18/23<br>17:35 15:51-16:21/30               | 06:08 17:50-18:06/16<br>18:34 17:11-17:47/36                               | 05:47 19:06-19:55/49<br>20:39                             | 04:45 19:47-20:36/49<br>21:38               | 04:24 19:52-20:39/47<br>22:08 |
| 25                          | 08:25<br>16:28                               | 07:19 16:27-16:59/32 07:54-08:19/25<br>17:37 15:51-16:20/29               | 06:05 17:48-18:08/20<br>18:36 17:09-17:47/38                               | 05:45 19:08-19:54/46<br>20:41                             | 04:43 19:48-20:36/48<br>21:39               | 04:25 19:52-20:39/47<br>22:08 |
| 26                          | 08:23<br>16:30                               | 07:16 16:33-17:00/27 07:54-08:19/25<br>17:39 15:53-16:19/26               | 06:03 17:09-18:11/62<br>18:38  | 05:42 19:43-19:51/8 20:08-20:11/3<br>20:43 19:10-19:40/30 | 04:42 19:48-20:36/48<br>21:41               | 04:25 19:51-20:39/48<br>22:08 |
| 27                          | 08:22<br>16:32                               | 07:14 16:32-17:00/28 07:53-08:19/26<br>17:41 15:54-16:17/23               | 06:00 17:08-18:12/64<br>18:40  | 05:40 19:24-19:39/15 19:13-19:21/8<br>20:45 20:06-20:13/7 | 04:40 19:48-20:36/48<br>21:43               | 04:26 19:52-20:40/48<br>22:08 |
| 28                          | 08:20<br>16:35                               | 07:11 17:09-17:14/5 15:55-16:15/20<br>17:43 16:31-17:00/29 07:54-08:20/26 | 05:57 17:07-18:14/67<br>18:43  | 05:38 19:27-19:36/9<br>20:47 20:05-20:15/10               | 04:39 19:47-20:36/49<br>21:44               | 04:26 19:53-20:40/47<br>22:08 |
| 29                          | 08:18<br>16:37                               |   | 06:55 18:08-19:17/69<br>19:45  | 05:35 20:04-20:18/14<br>20:49                             | 04:38 19:47-20:35/48<br>21:46               | 04:27 19:52-20:40/48<br>22:07 |
| 30                          | 08:16 16:01-16:03/2<br>16:39                 |   | 06:52 18:07-19:18/71<br>19:47  | 05:33 20:03-20:19/16<br>20:51                             | 04:36 19:47-20:35/48<br>21:47               | 04:27 19:53-20:41/48<br>22:07 |
| 31                          | 08:14 16:00-16:06/6<br>16:41                 |   | 06:49 18:06-19:19/73<br>19:49  |   | 04:35 19:47-20:35/48<br>21:49               |                               |
| Potential sun hours         | 236  | 266   | 366  | 426   | 507   | 528                           |
| Sum of minutes with flicker | 516  | 1331  | 1902   | 1665  | 1220  | 1431                          |

Table 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\_V162\_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 13:21/4.1.254

## SHADOW - Calendar per WTG

Calculation: Flickering\_Vestas\_162\_Prikuli\_B WTG: PrRR3 - VESTAS V162-6.2 6200 162.0 !O! hub: 166,0 m (TOT: 247,0 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 19:53-20:41/48<br>22:07 | 05:14 20:09-20:47/38<br>21:26   | 06:15 18:49-19:41/52<br>20:12 18:17-18:30/13 | 07:15 17:46-18:20/34 07:59-08:17/18<br>18:52 17:22-17:24/2                 | 07:20 15:24-15:48/24<br>16:34               | 08:22 09:53-10:04/11<br>15:43 09:32-09:48/16 |
| 2                           | 04:29 19:53-20:40/47<br>22:06 | 05:16 20:11-20:47/36<br>21:24   | 06:17 18:48-19:37/49<br>20:09 18:13-18:33/20 | 07:17 17:43-18:19/36 07:58-08:17/19<br>18:49 17:16-17:30/14                | 07:23 15:25-15:46/21<br>16:32               | 08:24 09:52-10:06/14<br>15:42 09:32-09:49/17 |
| 3                           | 04:30 19:53-20:41/48<br>22:06 | 05:18 20:16-20:47/31<br>21:21   | 06:19 18:46-19:32/46<br>20:07 18:11-18:35/24 | 07:19 17:41-18:16/35 07:57-08:17/20<br>18:46 17:13-17:32/19                | 07:25 15:27-15:46/19<br>16:30               | 08:25 09:52-10:07/15<br>15:41 09:32-09:50/18 |
| 4                           | 04:31 19:53-20:41/48<br>22:05 | 05:20 20:15-20:46/31<br>21:19   | 06:21 18:45-19:31/46<br>20:04 18:09-18:36/27 | 07:21 17:40-18:10/30 18:11-18:13/2<br>18:44 17:11-17:33/22 07:56-08:17/21  | 07:27 15:27-15:47/20<br>16:27               | 08:27 09:52-10:09/17<br>15:41 09:33-09:51/18 |
| 5                           | 04:32 19:53-20:41/48<br>22:04 | 05:21 20:13-20:43/30<br>21:17   | 06:23 18:43-19:29/46<br>20:01 18:06-18:36/30 | 07:23 17:39-18:07/28 07:56-08:16/20<br>18:41 17:09-17:34/25                | 07:29 15:27-15:46/19<br>16:25               | 08:28 09:33-10:10/37<br>15:40                |
| 6                           | 04:33 19:54-20:42/48<br>22:04 | 05:23 20:13-20:41/28<br>21:15   | 06:25 18:43-19:28/45<br>19:59 18:04-18:37/33 | 07:25 17:38-18:02/24 08:35-08:46/11<br>18:38 17:08-17:34/26 07:56-08:15/19 | 07:31 15:28-15:47/19<br>16:23               | 08:30 09:32-10:10/38<br>15:39                |
| 7                           | 04:34 19:54-20:42/48<br>22:03 | 05:25 20:12-20:39/27<br>21:13   | 06:27 18:42-19:25/43<br>19:56 18:03-18:38/35 | 07:27 17:37-18:00/23 08:32-08:48/16<br>18:36 17:06-17:35/29 07:56-08:14/18 | 07:33 15:28-15:46/18<br>16:21               | 08:31 09:33-10:11/38<br>15:38 10:15-10:20/5  |
| 8                           | 04:35 19:54-20:42/48<br>22:02 | 05:27 20:12-20:37/25<br>21:11   | 06:29 18:41-19:23/42<br>19:53 18:02-18:38/36 | 07:29 17:37-17:59/22 08:30-08:50/20<br>18:33 17:05-17:35/30 07:58-08:13/15 | 07:36 15:28-15:43/15<br>16:19               | 08:33 09:34-10:12/38<br>15:38 10:14-10:22/8  |
| 9                           | 04:36 19:54-20:42/48<br>22:01 | 05:29 20:12-20:31/19<br>21:08 20:33-20:35/2                             | 06:31 18:39-19:20/41<br>19:51 18:01-18:38/37 | 07:31 17:37-17:59/22 08:29-08:51/22<br>18:30 17:05-17:35/30 08:01-08:12/11 | 07:38 15:29-15:42/13<br>16:17               | 08:34 09:34-10:12/38<br>15:37 10:13-10:23/10 |
| 10                          | 04:38 19:54-20:42/48<br>22:00 | 05:31 20:12-20:31/19<br>21:06   | 06:33 18:00-19:14/74<br>19:48                | 07:34 17:37-17:56/19 08:28-08:52/24<br>18:28 17:04-17:35/31 08:03-08:09/6  | 07:40 15:30-15:39/9<br>16:15                | 08:36 09:34-10:25/51<br>15:37                |
| 11                          | 04:39 19:55-20:43/48<br>21:59 | 05:33 20:11-20:30/19<br>21:04   | 06:35 17:59-19:12/73<br>19:45                | 07:36 17:38-17:54/16 08:27-08:52/25<br>18:25 17:05-17:35/30                | 07:42 15:31-15:38/7<br>16:13                | 08:37 09:34-10:26/52<br>15:37                |
| 12                          | 04:40 19:55-20:43/48<br>21:58 | 05:35 20:11-20:29/18<br>21:02   | 06:37 17:59-19:11/72<br>19:43                | 07:38 17:39-17:51/12 16:34-16:44/10<br>18:23 17:04-17:35/31 08:27-08:52/25 | 07:44 15:33-15:35/2<br>16:11                | 08:38 09:35-10:26/51<br>15:36                |
| 13                          | 04:42 19:55-20:44/49<br>21:57 | 05:37 20:11-20:27/16<br>20:59   | 06:39 17:58-19:10/72<br>19:40                | 07:40 17:40-17:48/8 16:30-16:47/17<br>18:20 17:04-17:34/30 08:26-08:52/26  | 07:46 15:35-15:47/17<br>16:09               | 08:39 09:36-10:27/51<br>15:36                |
| 14                          | 04:43 19:55-20:44/49<br>21:55 | 05:39 20:12-20:25/13<br>20:57   | 06:41 17:58-19:07/69<br>19:37                | 07:42 17:43-17:46/3 16:28-16:49/21<br>18:17 17:04-17:33/29 08:26-08:52/26  | 07:48 15:36-16:49/21<br>16:08               | 08:40 09:36-10:29/53<br>15:36                |
| 15                          | 04:44 19:56-20:45/49<br>21:54 | 05:41 19:34-19:44/10<br>20:55 20:13-20:22/9                             | 06:43 17:58-19:05/67<br>19:35                | 07:44 17:43-17:32/28 08:26-08:52/26<br>18:15 16:25-16:50/25                | 07:51 15:37-16:50/25<br>16:06               | 08:41 09:36-10:29/53<br>15:36                |
| 16                          | 04:46 19:56-20:45/49<br>21:53 | 05:43 19:53-19:56/3 20:14-20:20/6<br>20:52 19:31-19:47/16 19:20-19:29/9 | 06:45 17:58-19:02/64<br>19:32                | 07:46 17:02-17:32/30 08:26-08:51/25<br>18:12 16:25-16:52/27                | 07:53 15:38-16:52/27<br>16:04               | 08:42 09:37-10:30/53<br>15:36                |
| 17                          | 04:48 19:56-20:45/49<br>21:52 | 05:45 19:49-19:58/9 20:15-20:17/2<br>20:50 19:17-19:47/30               | 06:47 17:58-18:59/61<br>19:29                | 07:48 16:59-17:31/32 08:26-08:50/24<br>18:10 16:23-16:52/29                | 07:55 15:39-16:52/29<br>16:02               | 08:43 09:37-10:31/54<br>15:36                |
| 18                          | 04:49 19:57-20:46/49<br>21:50 | 05:47 19:13-20:00/47<br>20:47   | 06:49 17:58-18:56/58<br>19:26                | 07:50 16:56-17:29/33 08:26-08:49/23<br>18:07 16:22-16:53/31                | 07:57 15:40-16:53/31<br>16:01               | 08:44 09:37-10:30/53<br>15:36                |
| 19                          | 04:51 19:57-20:46/49<br>21:49 | 05:49 19:12-20:01/49<br>20:45   | 06:51 18:36-18:53/17<br>19:24 17:57-18:33/36 | 07:52 16:55-17:27/32 08:27-08:48/21<br>18:05 16:21-16:53/32                | 07:59 15:41-16:53/32<br>15:59               | 08:45 09:38-10:31/53<br>15:37                |
| 20                          | 04:52 19:58-20:46/48<br>21:47 | 05:51 19:10-20:02/52<br>20:42   | 06:53 18:38-18:50/12<br>19:21 17:56-18:32/36 | 07:54 16:21-17:25/64<br>18:02 08:29-08:47/18                               | 08:01 15:42-17:25/64<br>15:57               | 08:45 09:39-10:32/53<br>15:37                |
| 21                          | 04:54 19:58-20:46/48<br>21:46 | 05:53 19:09-20:02/53<br>20:40   | 06:55 18:40-18:48/8<br>19:18 17:54-18:31/37  | 07:57 16:20-17:20/60<br>18:00 08:30-08:45/15                               | 08:03 15:43-17:20/60<br>15:56               | 08:46 09:39-10:32/53<br>15:37                |
| 22                          | 04:56 19:59-20:47/48<br>21:44 | 05:55 19:08-20:02/54<br>20:37   | 06:57 17:52-18:29/37<br>19:16                | 07:59 16:19-17:14/55<br>17:57 08:33-08:42/9                                | 08:05 15:44-17:14/55<br>15:54               | 08:47 09:39-10:33/54<br>15:38                |
| 23                          | 04:57 19:59-20:46/47<br>21:42 | 05:57 19:08-20:02/54<br>20:35   | 06:59 17:51-18:27/36<br>19:13                | 08:01 16:19-17:14/55<br>17:55  | 08:07 15:45-17:14/55<br>15:53               | 08:47 09:40-10:33/53<br>15:38                |
| 24                          | 04:59 20:00-20:47/47<br>21:41 | 05:59 19:07-20:02/55<br>20:32   | 07:01 17:50-18:26/36<br>19:10                | 08:03 16:19-17:15/56<br>17:53  | 08:09 15:46-17:15/56<br>15:51               | 08:48 09:41-10:34/53<br>15:39                |
| 25                          | 05:01 20:01-20:47/46<br>21:39 | 06:01 19:07-19:59/52<br>20:30   | 07:03 17:49-18:26/37<br>19:08                | 07:05 15:19-16:14/55<br>16:50  | 08:11 15:47-16:14/55<br>15:50               | 08:48 09:41-10:34/53<br>15:39                |
| 26                          | 05:03 20:01-20:46/45<br>21:37 | 06:03 19:04-19:56/52<br>20:27   | 07:05 17:49-18:26/37<br>19:05                | 07:07 15:53-16:13/20<br>16:48 15:19-15:52/33                               | 08:13 09:37-09:40/3<br>15:49                | 08:48 09:41-10:35/54<br>15:40                |
| 27                          | 05:04 20:02-20:46/44<br>21:35 | 06:05 19:00-19:54/54<br>20:25   | 07:07 17:48-18:26/38<br>19:02                | 07:09 15:54-16:12/18<br>16:46 15:20-15:53/33                               | 08:15 09:35-09:43/8<br>15:48                | 08:48 09:42-10:35/53<br>15:41                |
| 28                          | 05:06 20:04-20:47/43<br>21:33 | 06:07 18:57-19:51/54<br>20:22   | 07:09 17:48-18:25/37<br>19:00 08:04-08:13/9  | 07:12 15:54-16:10/16<br>16:43 15:20-15:52/32                               | 08:16 09:33-09:45/12<br>15:46               | 08:49 09:42-10:35/53<br>15:42                |
| 29                          | 05:08 20:04-20:47/43<br>21:31 | 06:09 18:55-19:49/54<br>20:20   | 07:11 17:48-18:24/36<br>18:57 08:02-08:15/13 | 07:14 15:55-16:07/12<br>16:41 15:20-15:51/31                               | 08:18 09:56-10:00/4<br>15:45 09:33-09:46/13 | 08:49 09:43-10:35/52<br>15:43                |
| 30                          | 05:10 20:06-20:47/41<br>21:30 | 06:11 18:54-19:46/52<br>20:17   | 07:13 17:48-18:23/35<br>18:54 08:00-08:16/16 | 07:16 15:58-16:05/7<br>16:39 15:22-15:50/28                                | 08:20 09:54-10:03/9<br>15:44 09:32-09:47/15 | 08:49 09:43-10:36/53<br>15:44                |
| 31                          | 05:12 20:07-20:48/41<br>21:28 | 06:13 18:51-19:44/53<br>20:14   |  | 07:18 16:01-16:02/1<br>16:36 15:22-15:49/27                                |   | 08:49 09:43-10:35/52<br>15:45                |
| Potential sun hours         | 529                           | 469   | 384  | 324  | 248   | 217  |
| Sum of minutes with flicker | 1459                          | 1181  | 1788   | 2135   | 250   | 1498   |

Table 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 |