

Project:

Flickering\_Nordex\_N163\_Prikuli\_A

Licensed user:

SIA Estonian, Latvian &amp; Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Laura Kurzemniece / laura.kurzemniece@environment.lv

Calculated:

15.07.2025 11:44/4.1.254

## SHADOW - Main Result

Calculation: Flickering\_Nordex\_N163\_Prikuli\_A

### Assumptions for shadow calculations

Maximum distance for influence

Calculate only when more than 20 % of sun is covered by the blade

Please look in WTG table

Minimum sun height over horizon for influence

3 °

Day step for calculation

1 days

Time step for calculation

1 minutes

Sunshine probability S (Average daily sunshine hours) []

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

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

Monthly aggregation of real case reduction

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:

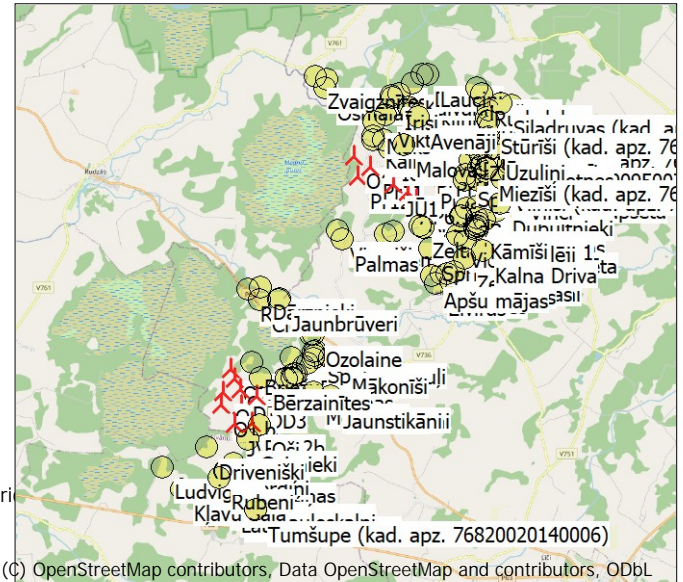
DHM: Elevation Grid Data Object: Nordex\_N163\_A\_Prikuli\_mirgosana\_EMDGrid

Receptor grid resolution: 1,0 m

Topographic shadow included in calculation

All coordinates are in

Latvian TM LKS92-LKS92 (LV)



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL

Scale 1:250 000

New WTG

Shadow receptor

### WTGs

	Y	X	Z	Row data/Description	WTG type			Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
					Valid	Manufact.	Type-generator				Calculation distance [m]	RPM [RPM]
			[m]									
AP2	661 860	254 894	107,2	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
AP6.1	661 549	255 141	107,2	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
DD1	656 226	248 422	102,8	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
DD3	656 793	248 209	104,2	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
JV1	656 086	247 254	103,8	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
JU1	661 068	255 365	106,1	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
O1.b	655 629	247 870	103,0	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
O2	655 900	249 092	104,1	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
O3	656 056	248 761	104,5	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
O4	655 674	248 309	102,6	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
O5	656 292	247 881	103,7	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
O6	659 724	256 257	103,3	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
P19.2b	656 672	247 344	104,5	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
Pr11	660 297	255 945	103,9	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
Pr12	659 850	255 600	106,4	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
Pr25	662 048	256 166	107,7	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
Pr3a	662 202	255 682	108,9	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7
PrRR3	662 676	256 121	108,8	NORDEX N163/6.X 7000 163.0 !.. Yes	Yes	NORDEX	N163/6.X-7 000	7 000	163,0	169,0	1 784	10,7

### Shadow receptor-Input

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
76740020095007	665 326	256 487	117,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Alksniš i	660 861	258 289	103,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Apš u mājas	662 436	252 434	111,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Apš upes	664 320	256 510	114,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Atvasites	665 481	256 816	117,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Avenes	663 074	252 236	111,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Avenaji	661 794	257 640	107,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Avoti	665 209	256 866	112,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Avotini	658 341	249 248	107,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Bajari	662 974	252 492	111,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Balož i	664 866	256 033	115,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Betiš ki 1	663 889	254 123	115,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0

To be continued on next page...

## SHADOW - Main Result

Calculation: Flickering\_Nordex\_N163\_Prikuli\_A

...continued from previous page

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
Betiš ku kapseta	663 494	253 590	113,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Brencani	663 830	254 775	112,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Briež i	664 432	257 202	111,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Briež udarzs	656 572	249 327	104,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Bruveri	657 377	251 424	103,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Bucinieki	662 104	253 981	109,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Burtnieki	662 923	253 030	109,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Berzainites	656 918	248 811	106,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Celinmajas	663 450	252 662	112,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Celmalas	664 641	255 732	113,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Celtekas	665 020	256 148	116,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Cielavinas	657 977	248 881	107,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Dadziš i	665 501	256 775	118,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Dauguli	664 677	255 783	114,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Driveniš ki	655 208	246 485	104,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Dubultnieki	664 590	254 861	115,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Dzeniš i	657 699	248 808	106,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Dzeni	664 921	256 096	115,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Dzintarnieki	664 124	254 289	116,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Dzirnavas	663 276	252 997	110,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Dzitari	663 333	254 396	110,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Darzini	661 862	259 032	105,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Darznieki	656 804	251 837	102,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Elsti	664 470	254 634	114,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Elvirs	662 597	252 162	110,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Fridrisgofa	657 250	245 000	107,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Gabri	663 870	254 401	112,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Gaitnieki	656 555	246 758	107,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Grovani	663 912	256 472	114,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Ievaiš i	660 905	256 554	105,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Irbeni	663 854	255 609	111,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Irš i	665 065	256 342	115,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Ivaiš i	664 474	255 333	112,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Ivdri	664 089	257 697	110,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jasmini	665 081	256 364	115,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaunbruveri	657 435	251 463	103,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaundzelzava	661 117	253 820	108,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaundzitari	663 326	254 401	110,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaunie Grantkalni	656 103	244 551	106,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaunie Mozuli	658 588	249 745	106,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaunkaleji	663 827	254 009	115,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaunkaleji 1	663 818	254 047	114,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaunlauki	665 185	254 984	113,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaunožoli	665 094	256 400	115,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaunstikani	659 237	248 304	108,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaunstikani	659 517	248 314	108,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaunares	655 648	244 920	105,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jaurini	662 738	252 490	111,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Jumiš i	665 190	255 466	115,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Kalna Driva	664 108	253 286	113,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Kalnbirzes	663 117	253 558	110,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Kalnieš i 2 (kad. apz. 76740010016001)	660 343	256 960	104,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Kalnieš i 2 (kad. apz. 76740030024001)	660 312	256 805	104,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Kalvani	661 589	258 741	104,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Kamenes	663 997	256 170	114,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Kamiš i	663 921	254 080	116,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Karklini	661 126	258 380	103,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Klavinas	664 976	256 181	115,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Klavu Sala	654 403	245 061	103,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Laimnieki	657 951	248 932	107,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Lapegles	665 378	256 711	117,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Latini	655 995	244 714	105,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Laucini	662 057	259 067	105,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Lielo Oriš u 2 maju zeme	664 205	257 398	111,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0

To be continued on next page...

## SHADOW - Main Result

Calculation: Flickering\_Nordex\_N163\_Prikuli\_A

...continued from previous page

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
	Linu Diki	661 560	257 748	104,9	1,0	1,0	90,0	"Green house mode"	2,0
	Ludvigova	653 760	245 733	103,9	1,0	1,0	90,0	"Green house mode"	2,0
Lidumi (kad. apz. 76740020172001)	664 140	257 044	112,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Lidumi (kad. apz. 76740020238001)	665 222	256 480	117,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
	Lidums	665 555	256 887	118,2	1,0	1,0	90,0	"Green house mode"	2,0
	Lipenas	664 657	257 681	111,6	1,0	1,0	90,0	"Green house mode"	2,0
	Madaras	664 939	256 130	115,5	1,0	1,0	90,0	"Green house mode"	2,0
	Magones	665 517	256 850	118,2	1,0	1,0	90,0	"Green house mode"	2,0
	Maksimova	660 356	257 402	103,1	1,0	1,0	90,0	"Green house mode"	2,0
	Malova	661 357	256 686	106,3	1,0	1,0	90,0	"Green house mode"	2,0
	Maurini	663 406	255 572	110,5	1,0	1,0	90,0	"Green house mode"	2,0
	Maurinmajas	663 916	254 193	115,2	1,0	1,0	90,0	"Green house mode"	2,0
	Meldri	665 243	256 507	117,4	1,0	1,0	90,0	"Green house mode"	2,0
	Mež noras	658 091	248 990	107,4	1,0	1,0	90,0	"Green house mode"	2,0
	Mež otnes	658 648	248 430	107,1	1,0	1,0	90,0	"Green house mode"	2,0
	Mež rozites	665 183	256 521	115,4	1,0	1,0	90,0	"Green house mode"	2,0
	Mež viteni	665 037	256 194	116,5	1,0	1,0	90,0	"Green house mode"	2,0
	Mež abele	663 578	256 295	110,4	1,0	1,0	90,0	"Green house mode"	2,0
	Mež ares	663 674	258 667	108,6	1,0	1,0	90,0	"Green house mode"	2,0
Mieziš i (kad. apz. 76740020200001)	664 145	256 028	114,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Mieziš i (kad. apz. 76740020200004)	664 132	256 020	115,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
	Mikili	664 759	256 013	112,9	1,0	1,0	90,0	"Green house mode"	2,0
	Mozuli	657 946	248 835	107,6	1,0	1,0	90,0	"Green house mode"	2,0
	Makoniš i	659 513	249 480	106,9	1,0	1,0	90,0	"Green house mode"	2,0
	Makoni	659 167	249 580	106,0	1,0	1,0	90,0	"Green house mode"	2,0
	Nadež da	664 958	256 156	115,6	1,0	1,0	90,0	"Green house mode"	2,0
	Oriš u kapseta	664 710	255 710	115,4	1,0	1,0	90,0	"Green house mode"	2,0
	Ozolaine	658 590	250 317	106,7	1,0	1,0	90,0	"Green house mode"	2,0
	Oš i	656 923	247 246	107,7	1,0	1,0	90,0	"Green house mode"	2,0
	Oš mala	658 673	258 469	102,3	1,0	1,0	90,0	"Green house mode"	2,0
	Oš ulejas	658 610	249 503	107,5	1,0	1,0	90,0	"Green house mode"	2,0
	Paegles	665 277	256 614	116,7	1,0	1,0	90,0	"Green house mode"	2,0
	Palmas	659 450	253 488	105,1	1,0	1,0	90,0	"Green house mode"	2,0
	Pastari	658 637	249 620	106,9	1,0	1,0	90,0	"Green house mode"	2,0
	Pastarini	658 469	249 352	107,6	1,0	1,0	90,0	"Green house mode"	2,0
	Paviani	665 073	256 257	116,5	1,0	1,0	90,0	"Green house mode"	2,0
	Priednieki	664 845	258 157	111,7	1,0	1,0	90,0	"Green house mode"	2,0
	Purmala	663 537	256 796	109,7	1,0	1,0	90,0	"Green house mode"	2,0
	Purmalieš i	664 090	257 934	110,1	1,0	1,0	90,0	"Green house mode"	2,0
	Purvietas	655 881	245 686	106,7	1,0	1,0	90,0	"Green house mode"	2,0
	Purvietinas	655 833	245 670	106,7	1,0	1,0	90,0	"Green house mode"	2,0
	Rapš i	664 191	256 244	115,2	1,0	1,0	90,0	"Green house mode"	2,0
	Riteniš i	663 525	254 669	112,8	1,0	1,0	90,0	"Green house mode"	2,0
	Robež nieki	656 362	251 744	102,7	1,0	1,0	90,0	"Green house mode"	2,0
	Rozes	657 745	248 827	106,8	1,0	1,0	90,0	"Green house mode"	2,0
	Rož ulejas	659 327	248 292	108,6	1,0	1,0	90,0	"Green house mode"	2,0
	Rubeni	655 656	245 455	106,0	1,0	1,0	90,0	"Green house mode"	2,0
	Rubeniš i	657 988	248 986	107,5	1,0	1,0	90,0	"Green house mode"	2,0
	Rudzdobes	663 876	258 472	109,6	1,0	1,0	90,0	"Green house mode"	2,0
Salas pamatskola (kad. apz. 76740020242001)	664 997	256 058	116,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Salas pamatskola (kad. apz. 76740020242004)	664 904	255 955	116,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
	Sauleskalni	657 158	244 852	107,3	1,0	1,0	90,0	"Green house mode"	2,0
	Saulrieti	658 485	250 333	106,6	1,0	1,0	90,0	"Green house mode"	2,0
	Saulstari	664 715	255 179	113,0	1,0	1,0	90,0	"Green house mode"	2,0
	Senci	665 146	256 281	116,8	1,0	1,0	90,0	"Green house mode"	2,0
Siladruvas (kad. apz. 76740020177001)	664 505	258 192	110,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Siladruvas (kad. apz. 76740020212001)	664 711	256 173	111,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
	Silares	665 289	256 555	117,6	1,0	1,0	90,0	"Green house mode"	2,0
	Sirmiš i	664 350	256 733	112,6	1,0	1,0	90,0	"Green house mode"	2,0
	Skalbes	657 893	249 526	107,1	1,0	1,0	90,0	"Green house mode"	2,0
	Slokas	664 213	254 481	115,3	1,0	1,0	90,0	"Green house mode"	2,0
	Smelteri	664 601	255 078	113,9	1,0	1,0	90,0	"Green house mode"	2,0
	Smelteru biblioteka	664 995	256 204	115,7	1,0	1,0	90,0	"Green house mode"	2,0
	Smelteru kapseta	664 545	255 472	114,8	1,0	1,0	90,0	"Green house mode"	2,0

To be continued on next page...

## SHADOW - Main Result

Calculation: Flickering\_Nordex\_N163\_Prikuli\_A

...continued from previous page

No.	Y	X	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
			[m]	[m]	[m]	[m]	[°]		[m]
Smedes	655 859	245 000	105,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Sniedzini	663 859	253 965	115,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Sporanu majas	663 441	255 799	110,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Spridiš i 3	662 335	253 285	110,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Spulgas	658 680	249 764	105,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Stikani	665 483	256 634	116,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Sturiš i (kad. apz. 76740020069001)	664 120	257 592	112,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Sturiš i (kad. apz. 76740020069009)	664 136	257 576	111,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Tebeci	660 684	256 830	104,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Torna iela 10	664 941	256 262	113,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Torna iela 11	664 943	256 332	113,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Torna iela 12	664 972	256 261	114,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Torna iela 2	664 853	256 117	114,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Torna iela 3	664 857	256 228	112,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Torna iela 3A	664 891	256 234	113,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Torna iela 4	664 875	256 101	114,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Torna iela 5	664 900	256 260	113,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Torna iela 6	664 912	256 215	114,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Torna iela 7	664 917	256 283	113,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Torna iela 8	664 930	256 236	114,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Torna iela 9	664 930	256 305	113,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Tumš upe (kad. apz. 76820020140001)	656 882	244 418	105,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Tumš upe (kad. apz. 76820020140006)	656 908	244 424	105,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Vecie Cerini	663 420	252 662	112,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Vecas Zemesbites	663 869	256 024	114,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Veikals	665 153	256 482	115,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Veldres	665 170	256 411	116,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Viesani	663 230	253 776	110,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Viktorovka	660 711	257 666	104,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Vilcani	665 152	256 394	116,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Vilniš i (kad. apz. 76740020245001)	664 657	255 742	114,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Vilniš i (kad. apz. 76740020245004)	664 639	255 715	113,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Vindeks	665 050	256 305	115,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Vinci	665 162	255 438	115,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Virsaļi i	659 276	253 774	105,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Valodzites	663 169	252 594	112,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Vejotnes	665 336	256 506	117,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Verdini	656 111	245 943	106,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Veris	665 055	256 227	116,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Vetras	664 087	255 916	114,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Veveru majas	661 480	257 917	104,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Zarini	658 742	258 746	102,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Zelmeni	663 470	253 010	111,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Zelta Dibens	661 992	254 047	109,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Zemesbites	663 975	256 124	114,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Zemnieka seta	660 875	253 695	107,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Zirnekliš i	663 760	256 674	112,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Zvaigznites	658 348	258 814	103,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Zagiš i	665 010	256 229	115,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Abolini	665 200	256 449	117,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Ciekuri	656 763	251 411	102,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Cinguli	661 888	257 713	107,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Eveles	665 021	256 098	116,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Irisi	660 924	258 249	104,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Uzuli	665 346	256 617	118,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
Uzulini	664 330	256 739	112,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0

## SHADOW - Main Result

Calculation: Flickering\_Nordex\_N163\_Prikuli\_A

### Calculation Results

Shadow receptor

No.	Shadow, worst case			Shadow, expected values	
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]	
76740020095007	0:00	0	0:00	0:00	
Alksniš i	0:00	0	0:00	0:00	
Apš u majas	0:00	0	0:00	0:00	
Apš upes	8:00	28	0:23	3:12	
Atvasites	0:00	0	0:00	0:00	
Avenes	0:00	0	0:00	0:00	
Avenaji	14:52	46	0:23	1:26	
Avoti	0:00	0	0:00	0:00	
Avotini	0:00	0	0:00	0:00	
Bajari	0:00	0	0:00	0:00	
Balož i	0:00	0	0:00	0:00	
Betiš ki 1	0:00	0	0:00	0:00	
Betiš ku kapseta	0:00	0	0:00	0:00	
Brencani	0:00	0	0:00	0:00	
Briež i	0:00	0	0:00	0:00	
Briež udarzs	199:54	212	1:42	39:24	
Bruveri	0:00	0	0:00	0:00	
Bucinieki	0:00	0	0:00	0:00	
Burtnieki	0:00	0	0:00	0:00	
Berzainites	278:14	306	1:37	70:32	
Celinmajas	0:00	0	0:00	0:00	
Celmalas	0:00	0	0:00	0:00	
Celtekas	0:00	0	0:00	0:00	
Cielavinas	13:27	37	0:28	3:47	
Dadziš i	0:00	0	0:00	0:00	
Dauguli	0:00	0	0:00	0:00	
Driveniš ki	17:52	60	0:24	9:16	
Dubultnieki	0:00	0	0:00	0:00	
Dzeniš i	42:47	114	0:35	14:20	
Dzeni	0:00	0	0:00	0:00	
Dzintarnieki	0:00	0	0:00	0:00	
Dzirnavas	0:00	0	0:00	0:00	
Dzitari	14:07	44	0:25	7:27	
Darzini	0:00	0	0:00	0:00	
Darznieki	0:00	0	0:00	0:00	
Elsti	0:00	0	0:00	0:00	
Elvras	0:00	0	0:00	0:00	
Fridrisgofa	0:00	0	0:00	0:00	
Gabri	0:00	0	0:00	0:00	
Gaitnieki	0:00	0	0:00	0:00	
Grovani	13:55	36	0:29	5:29	
Ievaiš i	117:55	165	1:17	27:00	
Irbeni	44:23	124	0:31	22:39	
Irš i	0:00	0	0:00	0:00	
Ivaiš i	0:00	0	0:00	0:00	
Ivdri	0:00	0	0:00	0:00	
Jasmini	0:00	0	0:00	0:00	
Jaunbruveri	0:00	0	0:00	0:00	
Jaundzelzava	0:00	0	0:00	0:00	
Jaundzitari	14:25	45	0:25	7:36	
Jaunie Grantkalni	0:00	0	0:00	0:00	
Jaunie Mozuli	0:00	0	0:00	0:00	
Jaunkaleji	0:00	0	0:00	0:00	
Jaunkaleji 1	0:00	0	0:00	0:00	
Jaunlauki	0:00	0	0:00	0:00	
Jaunožoli	0:00	0	0:00	0:00	
Jaunstikani	0:00	0	0:00	0:00	
Jaunstikani	0:00	0	0:00	0:00	
Jaunares	0:00	0	0:00	0:00	
Jaurini	0:00	0	0:00	0:00	
Jumiš i	0:00	0	0:00	0:00	
Kalna Driva	0:00	0	0:00	0:00	

To be continued on next page...



## SHADOW - Main Result

Calculation: Flickering\_Nordex\_N163\_Prikuli\_A

...continued from previous page

No.		Shadow, worst case			Shadow, expected values
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]
	Kalnbirzes	0:00	0	0:00	0:00
	Kalnieš i 2 (kad. apz. 76740010016001)	92:43	127	1:23	12:01
	Kalnieš i 2 (kad. apz. 76740030024001)	138:52	145	1:43	19:54
	Kalvani	0:00	0	0:00	0:00
	Kamenes	13:46	36	0:29	5:58
	Kamiš i	0:00	0	0:00	0:00
	Karklini	0:00	0	0:00	0:00
	Klavinas	0:00	0	0:00	0:00
	Klavu Sala	0:00	0	0:00	0:00
	Laimnieki	13:45	38	0:28	3:39
	Lapegles	0:00	0	0:00	0:00
	Latini	0:00	0	0:00	0:00
	Laucini	0:00	0	0:00	0:00
	Lielo Oriš u 2 maju zeme	0:00	0	0:00	0:00
	Linu Diki	0:00	0	0:00	0:00
	Ludvigova	0:00	0	0:00	0:00
	Lidumi (kad. apz. 76740020172001)	8:37	31	0:22	2:13
	Lidumi (kad. apz. 76740020238001)	0:00	0	0:00	0:00
	Lidums	0:00	0	0:00	0:00
	Lipenas	0:00	0	0:00	0:00
	Madaras	0:00	0	0:00	0:00
	Magones	0:00	0	0:00	0:00
	Maksimova	34:26	78	0:31	3:29
	Malova	106:52	181	1:32	23:25
	Maurini	47:30	136	0:32	22:13
	Maurinmajas	0:00	0	0:00	0:00
	Meldri	0:00	0	0:00	0:00
	Mež noras	11:19	34	0:25	2:58
	Mež otnes	0:00	0	0:00	0:00
	Mež rozītes	0:00	0	0:00	0:00
	Mež vīteni	0:00	0	0:00	0:00
	Mež abele	47:23	85	1:02	18:56
	Mež ares	0:00	0	0:00	0:00
	Mieziš i (kad. apz. 76740020200001)	11:44	36	0:26	5:23
	Mieziš i (kad. apz. 76740020200004)	11:59	36	0:26	5:31
	Mikili	0:00	0	0:00	0:00
	Mozuli	21:30	66	0:29	7:02
	Makoniš i	0:00	0	0:00	0:00
	Makoni	0:00	0	0:00	0:00
	Nadež da	0:00	0	0:00	0:00
	Oriš u kapseta	0:00	0	0:00	0:00
	Ozolaine	0:00	0	0:00	0:00
	Oš i	67:55	151	0:45	33:52
	Oš mala	0:00	0	0:00	0:00
	Oš ulejas	0:00	0	0:00	0:00
	Paegles	0:00	0	0:00	0:00
	Palmas	0:00	0	0:00	0:00
	Pastari	0:00	0	0:00	0:00
	Pastarini	0:00	0	0:00	0:00
	Paviani	0:00	0	0:00	0:00
	Priednieki	0:00	0	0:00	0:00
	Purmala	35:23	81	0:42	9:04
	Purmališ i	0:00	0	0:00	0:00
	Purvietas	0:00	0	0:00	0:00
	Purvietinas	0:00	0	0:00	0:00
	Rapš i	10:07	31	0:25	4:15
	Riteniš i	13:32	58	0:23	6:49
	Robež nieki	0:00	0	0:00	0:00
	Rozes	39:26	111	0:33	13:12
	Rož ulejas	0:00	0	0:00	0:00
	Rubeni	0:00	0	0:00	0:00
	Rubeniš i	12:46	37	0:27	3:18
	Rudzdobes	0:00	0	0:00	0:00

To be continued on next page...

## SHADOW - Main Result

Calculation: Flickering\_Nordex\_N163\_Prikuli\_A

...continued from previous page

No.	Shadow, worst case			Shadow, expected values	
	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]	
Salas pamatskola (kad. apz. 76740020242001)	0:00	0	0:00	0:00	
Salas pamatskola (kad. apz. 76740020242004)	0:00	0	0:00	0:00	
Sauleskalni	0:00	0	0:00	0:00	
Saulrieti	0:00	0	0:00	0:00	
Saulstari	0:00	0	0:00	0:00	
Senci	0:00	0	0:00	0:00	
Siladruvas (kad. apz. 76740020177001)	0:00	0	0:00	0:00	
Siladruvas (kad. apz. 76740020212001)	0:00	0	0:00	0:00	
Silares	0:00	0	0:00	0:00	
Sirmiņi	7:12	27	0:21	2:27	
Skalbes	14:02	48	0:24	1:30	
Slokas	0:00	0	0:00	0:00	
Smelteri	0:00	0	0:00	0:00	
Smelteru biblioteka	0:00	0	0:00	0:00	
Smelteru kapseta	0:00	0	0:00	0:00	
Smedes	0:00	0	0:00	0:00	
Sniedzini	0:00	0	0:00	0:00	
Sporanu majas	89:51	162	0:49	45:48	
Spridiņi 3	0:00	0	0:00	0:00	
Spulgas	0:00	0	0:00	0:00	
Stikani	0:00	0	0:00	0:00	
Sturiņi (kad. apz. 76740020069001)	0:00	0	0:00	0:00	
Sturiņi (kad. apz. 76740020069009)	0:00	0	0:00	0:00	
Tebeci	111:52	139	1:09	17:11	
Torna iela 10	0:00	0	0:00	0:00	
Torna iela 11	0:00	0	0:00	0:00	
Torna iela 12	0:00	0	0:00	0:00	
Torna iela 2	0:00	0	0:00	0:00	
Torna iela 3	0:00	0	0:00	0:00	
Torna iela 3A	0:00	0	0:00	0:00	
Torna iela 4	0:00	0	0:00	0:00	
Torna iela 5	0:00	0	0:00	0:00	
Torna iela 6	0:00	0	0:00	0:00	
Torna iela 7	0:00	0	0:00	0:00	
Torna iela 8	0:00	0	0:00	0:00	
Torna iela 9	0:00	0	0:00	0:00	
Tumš upe (kad. apz. 76820020140001)	0:00	0	0:00	0:00	
Tumš upe (kad. apz. 76820020140006)	0:00	0	0:00	0:00	
Vecie Cerini	0:00	0	0:00	0:00	
Vecas Zemesbites	26:06	73	0:32	11:50	
Veikals	0:00	0	0:00	0:00	
Veldres	0:00	0	0:00	0:00	
Viesani	0:00	0	0:00	0:00	
Viktorovka	21:03	74	0:24	2:10	
Vilcāni	0:00	0	0:00	0:00	
Vilniņi (kad. apz. 76740020245001)	0:00	0	0:00	0:00	
Vilniņi (kad. apz. 76740020245004)	0:00	0	0:00	0:00	
Vindeks	0:00	0	0:00	0:00	
Vinci	0:00	0	0:00	0:00	
Virsaļi	0:00	0	0:00	0:00	
Valodzites	0:00	0	0:00	0:00	
Vejotnes	0:00	0	0:00	0:00	
Verdini	0:00	0	0:00	0:00	
Veris	0:00	0	0:00	0:00	
Vetras	13:16	39	0:27	6:22	
Veveru majas	0:00	0	0:00	0:00	
Zarini	0:00	0	0:00	0:00	
Zelmeni	0:00	0	0:00	0:00	
Zelta Dibens	0:00	0	0:00	0:00	
Zemesbites	14:34	38	0:29	6:30	
Zemnieka seta	0:00	0	0:00	0:00	
Zirnekļi	16:13	40	0:31	5:02	
Zvaigznites	0:00	0	0:00	0:00	

To be continued on next page...

## SHADOW - Main Result

Calculation: Flickering\_Nordex\_N163\_Prikuli\_A

...continued from previous page

No.	Shadow, worst case		Max shadow hours per day	Shadow, expected values	
	Shadow hours per year [h/year]	Shadow days per year [days/year]		Shadow hours per year [h/year]	
Zagiš i	0:00	0	0:00	0:00	
Abolini	0:00	0	0:00	0:00	
Ciekuri	0:00	0	0:00	0:00	
Cinguli	8:00	32	0:19	0:43	
Eveles	0:00	0	0:00	0:00	
Irisi	0:00	0	0:00	0:00	
Uzuli	0:00	0	0:00	0:00	
Uzulini	7:19	28	0:22	2:28	

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

No.	Name	Worst case [h/year]	Expected [h/year]
AP2	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (12)	32:00	14:38
AP6.1	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (13)	13:42	1:18
DD1	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (5)	100:11	22:28
DD3	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (6)	174:30	26:55
JV1	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (8)	54:43	19:27
JU1	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (14)	50:25	4:46
O1.b	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (7)	64:01	20:53
O2	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (1)	76:17	35:01
O3	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (2)	83:09	27:35
O4	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (4)	32:25	6:59
O5	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (3)	45:49	6:32
O6	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (10)	152:14	31:43
P19.2b	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (18)	17:52	9:16
Pr11	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (11)	163:29	23:39
Pr12	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (9)	69:57	8:19
Pr25	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (15)	115:56	43:13
Pr3a	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (16)	106:15	33:04
PrRR3	NORDEX N163/6.X 7000 163.0 !OI hub: 169,0 m (TOT: 250,5 m) (17)	238:29	93:20

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

The calculation of the total expected values for a given receptor assumes a weighted average directional reduction for all WTGs contributing to shadow flicker within the same day. In the case where shadow flicker from different WTGs is not concurrent within the day, the total expected time at a given receptor may deviate marginally from the individual flicker time caused by each turbine separately.