

Project:

Mezares_AB211223

Licensed user:

SIA Estonian, Latvian & Lithuanian environment

Vilandes 3-6

LV-1010 Riga

0037167242411

Anna / anna@environment.lv

Calculated:

25/06/2024 18:19/4.0.540

SHADOW - Main Result

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
1.01	1.91	4.85	7.09	9.29	9.83	8.40	7.53	5.47	2.70	0.68	0.49

Operational hours are calculated from WTGs in calculation and wind distribution:

EmdWrf_N56.455_E026.098 - Mezares_Meteo (6)

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
434	458	529	455	479	767	770	921	1,193	1,059	818	546	8,428

Monthly aggregation of real case reduction

Idle start wind speed: Cut in wind speed from power curve

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:

Height contours used: Elevation Grid Data Object: Mezares_AB080124_EMDGr

Receptor grid resolution: 1.0 m

All coordinates are in

Latvian TM LKS92-LKS92 (LV)

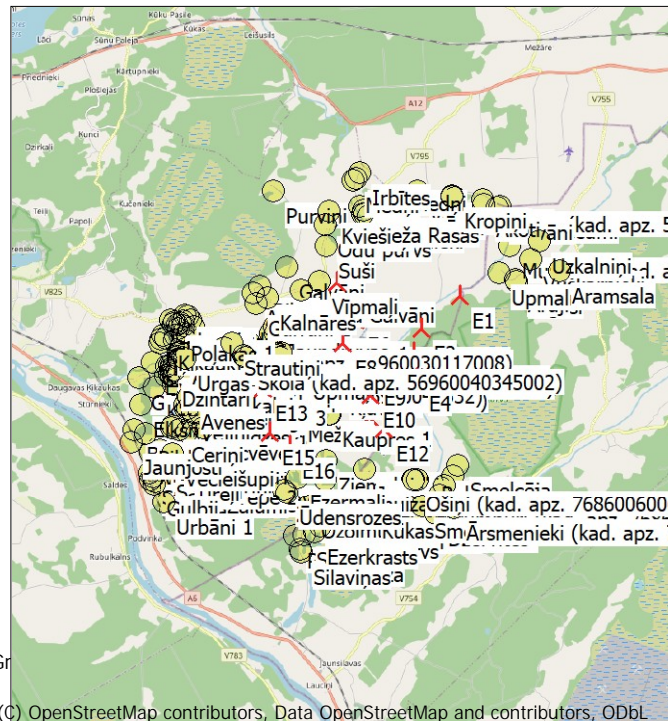
WTGs

	Y	X	Z	Row data/Description	WTG type		Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
					Valid	Manufact.					Calculation distance [m]	RPM
			[m]									[RPM]
E1	636,123	261,795	87.8	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E10	633,842	259,069	87.4	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E11	633,843	258,516	88.5	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E12	634,228	258,195	88.7	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E13	630,970	259,180	89.2	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E14	630,437	258,298	89.2	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E15	631,207	258,006	89.7	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E16	631,752	257,686	89.3	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E2	635,130	260,895	87.2	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E3	634,956	260,253	88.2	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E4	635,043	259,570	86.9	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E5	632,850	262,038	88.3	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E6	633,382	261,050	86.8	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E7	632,277	260,924	86.6	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E8	633,072	260,433	86.4	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8
E9	633,864	259,664	87.5	Siemens Gamesa SG 7.0-1...	Yes	Siemens Gamesa	SG 6.6-170-6,600	6,600	170.0	165.0	2,037	8.8

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]
	Airites	635,876	256,747	91.7	1.0	1.0	90.0	"Green house mode"	2.0
	Aizveji (kad. apz. 56960040532)	629,002	259,580	100.0	1.0	1.0	90.0	"Green house mode"	2.0
	Aizveji (kad. apz. 76860060094)	635,768	256,713	92.0	1.0	1.0	90.0	"Green house mode"	2.0
	Akoti	636,674	264,225	90.1	1.0	1.0	90.0	"Green house mode"	2.0
	Alinas	628,704	256,300	89.5	1.0	1.0	90.0	"Green house mode"	2.0
	Amati	628,536	259,717	91.7	1.0	1.0	90.0	"Green house mode"	2.0
	Aparnieki	629,126	260,192	94.1	1.0	1.0	90.0	"Green house mode"	2.0
	Aramsala	638,770	262,541	92.9	1.0	1.0	90.0	"Green house mode"	2.0
	Araji	637,584	262,271	90.2	1.0	1.0	90.0	"Green house mode"	2.0

To be continued on next page...



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

Scale 1:200,000

New WTG

Shadow receptor

SHADOW - Main Result

...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]
Atvari	628,628	259,598	95.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ausekli	628,815	260,550	93.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ausmas	629,007	258,901	109.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Auzani	628,634	256,499	91.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Avenes	629,026	258,878	110.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Avoti	629,135	256,223	93.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Avotini	630,655	261,679	95.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Bajari	629,023	260,908	96.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Biksti	630,824	261,888	96.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Birzes	628,257	260,382	93.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Birzmalieš	629,430	260,176	94.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Birznieki	633,413	264,080	89.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Birztaļas	627,606	257,975	91.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Bisenieki	629,834	259,085	98.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Bisenieki 3	629,826	259,009	100.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Bites	628,719	259,447	99.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Brivares	628,482	260,921	92.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Berzkalnes	634,025	256,561	89.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Caunes	628,625	259,206	100.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Cerini	628,810	258,021	99.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Cuculi	629,817	259,397	94.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Daugavas	628,190	256,616	88.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Dimanti	628,536	259,613	93.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Dravnieki	633,644	263,831	90.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Druvas	631,293	260,825	87.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Dzelmes	628,546	259,430	100.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Dzintari	628,482	259,479	95.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Dzervites	635,680	255,988	91.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Darzapites	630,445	260,035	87.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Elkšņi	627,782	258,640	91.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ezeravoti	628,028	259,796	86.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ezerkrasts	632,461	255,404	92.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ezermali	631,982	256,839	90.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ezermuiža	632,105	254,922	93.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ezerkikaukas	628,219	260,274	94.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Galvani	631,518	262,403	95.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Galvani 1	630,740	261,408	95.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Grantini 1	627,684	259,344	90.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Graudini	633,544	263,868	90.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Gulbji	628,166	256,539	89.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Gužņi	628,965	260,525	89.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ievas	629,234	258,853	109.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ievinas	628,734	260,063	92.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Irbites	633,367	264,961	91.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Jasmini	628,635	259,438	101.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Jaunberzi	629,247	257,905	97.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Jaundruvas	631,244	260,809	87.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Jaundruvas 1	631,328	260,722	88.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Jaunie Robežnieki	633,740	257,133	89.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Jaunjosti	627,550	257,637	87.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Jaunlakstīgalas	629,187	258,470	109.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Jaunleišņi	628,542	257,359	92.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Jaunmedņi	633,273	264,784	92.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Jaunmasani	635,253	255,939	90.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Jaunrudzati	628,619	258,104	102.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kalna Galvani	631,938	261,808	98.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kalnmuīža	632,721	256,821	92.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kalnsetas	628,817	260,893	97.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kalnvidi	628,922	261,019	99.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kalnares	631,053	261,571	97.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kalvani	637,034	264,141	92.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kaupernieki	628,104	259,103	93.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kaupres	632,783	258,532	90.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kaupres 1	632,799	258,538	90.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0

To be continued on next page...

SHADOW - Main Result

...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]
Krasta Ozoli	631,131	260,619	88.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Krastini	631,465	260,045	88.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kropini	635,841	264,423	92.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kvieš	632,611	263,913	90.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Klavas	632,956	259,394	90.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Klavini	631,053	256,922	91.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kukas	633,899	256,149	92.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Laides	629,905	259,102	97.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Landzani	629,286	258,641	110.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Landzani 1	629,116	258,741	111.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Landzani 4	628,932	258,678	110.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Landzani 5	629,081	258,816	110.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Latvani	628,741	259,821	92.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Lauri	628,857	261,035	95.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Lazdas	628,691	259,577	96.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Leiš upi	628,671	257,407	93.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Lejas	628,721	259,948	91.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Lejas 1	628,761	260,043	92.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Lidijas	628,814	260,756	96.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Lieknas	628,308	257,475	91.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Liepsala	633,000	259,440	91.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Liciš	629,928	260,232	91.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Licu Dzirnavas	628,599	260,384	83.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Maurini	628,561	260,808	93.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Mazezeri	632,423	255,859	91.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Medni	633,207	264,730	93.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Meistari	628,595	258,081	102.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Mež a Muiž	631,348	260,063	89.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Mež a Rasas	633,510	263,970	90.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Mež muiž	631,411	260,014	88.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Mež setas	629,183	260,305	91.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Mež vidi	631,891	258,644	91.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Muiž nieki (kad. apz. 56960040061)	630,201	259,845	91.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Muiž nieki (kad. apz. 76860010011)	637,413	263,145	89.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Malkalni	628,731	260,042	92.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Masanpurvs	632,626	255,556	94.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Neretas 1	629,011	259,825	98.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Neretas 2	628,850	259,919	93.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Neretas 4	628,845	259,878	94.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Neretas 5	628,808	259,865	94.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Neretas 7	628,864	259,858	94.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Neretas 8	629,008	259,758	98.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Nomales	628,268	257,536	91.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ogu purvs	632,503	263,565	90.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ozoli	628,150	256,740	89.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ozolmuiž a	632,309	256,092	92.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ozolsalina	631,296	256,744	90.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Oš ini (kad. apz. 76860060068001)	635,060	256,873	89.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Oš ini (kad. apz. 76860060068006)	635,063	256,890	89.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Paegli	628,749	260,846	96.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Palejas	628,405	259,432	93.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Pilskalni	627,910	257,878	94.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Pludmales	632,402	259,972	87.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Pludmales 1	632,389	259,979	87.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Polakas	628,651	260,771	96.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Polakas 1	628,617	260,509	88.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Polakas 1	628,685	260,683	96.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Polakas 3	629,096	260,749	92.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Pumpuri	635,789	256,507	91.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Pumpuri (kad. apz. 56960040091)	628,592	259,435	101.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Pumpuri (kad. apz. 76860060095)	635,766	256,497	92.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Purvini	631,100	264,407	94.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Pucsilavas	631,934	255,268	92.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Rasas	628,749	259,874	92.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0

To be continued on next page...

SHADOW - Main Result

...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]			
Rijasvecumi	637,124	264,171	92.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Robež nieki	634,016	255,849	92.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Rudzati	628,835	258,131	101.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Raceni	631,440	260,124	89.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ruki	633,500	263,869	90.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Salvijs	628,714	259,481	99.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Sarkani	628,420	257,013	89.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Sarmas	628,600	259,652	93.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Saulkrasti	629,817	260,364	90.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Saulītes	629,092	258,651	111.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Seglini	629,043	258,604	111.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Senlici	629,159	258,479	110.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Silavinas	632,151	254,869	91.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Skola (kad. apz. 56960040345001)	630,464	259,995	90.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Skola (kad. apz. 56960040345002)	630,497	259,971	90.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Skola (kad. apz. 56960040345005)	630,516	259,989	90.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Smelceja	636,214	257,300	92.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Smelceju majas	635,298	256,197	90.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Spridīši	630,287	259,867	91.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Spares	632,193	255,315	92.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Stacija Trepe 2	628,042	256,849	89.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Starumeni	629,570	260,072	91.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Stepi	628,477	259,722	91.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Straumenini	630,371	260,297	90.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Strauti	630,507	260,064	86.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Strautini	630,135	260,339	89.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Sušis	632,558	262,979	90.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Sipolini	628,994	257,983	98.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Turaiki	629,707	259,447	96.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Tireli	628,943	256,985	93.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Tudalinas	630,581	260,365	90.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Tujas	628,579	259,594	94.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Upenes	628,744	259,844	92.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Uplejas (kad. apz. 56760080007)	636,659	264,338	90.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Uplejas (kad. apz. 56960040385)	630,496	260,063	86.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Upmalas	635,965	256,028	92.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Upmales	631,821	259,742	87.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Upmalnieki	637,168	262,426	89.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Upmali	631,974	259,757	87.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Upiši	635,172	256,887	90.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Urbani 1	628,443	256,087	88.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Urgas	628,899	259,897	95.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Uzkalnini	638,196	263,298	92.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vaivarini	628,948	257,218	93.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vecleiš upi	628,630	257,375	93.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vecumi	634,938	264,519	92.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vecveveri	629,448	258,075	98.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Viduslejas	629,699	260,354	90.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vijas	628,097	256,668	89.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vilbaude	628,075	257,379	87.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vilniši	631,367	260,092	90.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vizbuli	628,861	260,418	90.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vizuli	628,712	259,518	98.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vuš karnieki	637,992	262,802	92.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Valodzes	629,323	258,499	108.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Valodzīte	628,942	260,026	94.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Varkali	628,415	259,666	90.8	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vejī	629,018	258,582	111.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vejīni	628,995	258,562	111.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vejkalni	629,623	259,351	101.3	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vetras	628,757	259,896	92.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Veveri	629,484	257,821	96.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Veveri 1	629,515	258,020	97.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Viksnes	635,836	264,397	92.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0

To be continued on next page...

SHADOW - Main Result

...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]			
Vipes skola 1	630,575	260,083	88.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Vipmali	632,392	262,044	91.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Zalumi	629,788	256,666	93.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Zemturi	628,601	260,851	94.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Zemites	636,102	257,016	91.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ziedini	630,259	260,280	89.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ziemeli	628,970	258,544	110.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ziemeļnieki	632,730	257,300	92.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Zvirgzdini	635,904	264,364	92.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Zilītes	631,276	260,636	88.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Zilusala	631,638	256,495	91.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Abeles	628,759	260,078	92.6	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Arsmenieki (kad. apz. 76860060006001)	636,146	256,152	93.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Arsmenieki (kad. apz. 76860060006008)	636,129	256,130	93.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ergliši	637,624	262,213	89.9	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ergli	635,311	264,222	91.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Ives	629,102	258,794	111.2	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kirši	629,224	258,684	110.5	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kikaukas (kad. apz. 56960030117001)	628,292	260,487	89.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Kikaukas (kad. apz. 56960030117008)	628,376	260,426	85.7	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Lovani	628,345	257,414	91.0	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Udensrozes	631,716	256,417	91.1	1.0	1.0	1.0	90.0	"Green house mode"	2.0
Udri	630,377	257,422	99.4	1.0	1.0	1.0	90.0	"Green house mode"	2.0

Calculation Results

Shadow receptor

No.	Shadow, worst case			Shadow, expected values	
	Shadow hours	Shadow days	Max shadow	Shadow hours	
	per year [h/year]	per year [days/year]	hours per day [h/day]	per year [h/year]	
Airites	0:00	0	0:00	0:00	
Aizveji (kad. apz. 56960040532)	14:36	60	0:22	1:46	
Aizveji (kad. apz. 76860060094)	0:00	0	0:00	0:00	
Akoti	0:00	0	0:00	0:00	
Alinas	0:00	0	0:00	0:00	
Amati	0:00	0	0:00	0:00	
Aparnieki	0:00	0	0:00	0:00	
Aramsala	0:00	0	0:00	0:00	
Araji	10:40	32	0:26	2:25	
Atvari	0:00	0	0:00	0:00	
Ausekli	0:00	0	0:00	0:00	
Ausmas	15:40	60	0:26	3:13	
Auzani	0:00	0	0:00	0:00	
Avenes	16:18	60	0:26	3:25	
Avoti	0:00	0	0:00	0:00	
Avotini	7:57	29	0:23	1:06	
Bajari	0:00	0	0:00	0:00	
Biksti	14:54	58	0:23	2:36	
Birzes	0:00	0	0:00	0:00	
Birzmalieši	8:30	31	0:22	0:58	
Birznieki	0:00	0	0:00	0:00	
Birztaļas	0:00	0	0:00	0:00	
Bisenieki	77:50	139	1:02	10:20	
Bisenieki 3	74:41	125	1:06	10:57	
Bites	0:00	0	0:00	0:00	
Brivares	0:00	0	0:00	0:00	
Berzkalnes	0:00	0	0:00	0:00	
Caunes	5:47	26	0:20	0:47	
Cerini	9:39	32	0:24	2:57	
Cuculi	64:13	126	0:47	7:04	
Daugavas	0:00	0	0:00	0:00	
Dimanti	0:00	0	0:00	0:00	
Dravnieki	4:57	26	0:15	0:14	

To be continued on next page...

SHADOW - Main Result

...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]	
Druvas	52:40	140	0:40	16:15	
Dzelmes	0:00	0	0:00	0:00	
Dzintari	0:00	0	0:00	0:00	
Dzervites	0:00	0	0:00	0:00	
Darzipites	62:18	133	0:41	6:08	
Elkš ni	0:00	0	0:00	0:00	
Ezeravoti	0:00	0	0:00	0:00	
Ezerkrasts	0:00	0	0:00	0:00	
Ezermali	0:00	0	0:00	0:00	
Ezermuiž a	0:00	0	0:00	0:00	
Ezerkikaukas	0:00	0	0:00	0:00	
Galvani	25:57	76	0:29	3:31	
Galvani 1	9:32	31	0:25	1:51	
Grantini 1	0:00	0	0:00	0:00	
Graudini	0:00	0	0:00	0:00	
Gulbji	0:00	0	0:00	0:00	
Guž ani	0:00	0	0:00	0:00	
Ievas	22:41	69	0:30	4:43	
Ievinas	0:00	0	0:00	0:00	
Irbites	0:00	0	0:00	0:00	
Jasmini	0:00	0	0:00	0:00	
Jaunberzi	27:50	79	0:32	8:45	
Jaundruvas	50:07	139	0:38	15:33	
Jaundruvas 1	49:18	138	0:41	15:20	
Jaunie Robež nieki	0:00	0	0:00	0:00	
Jaunjosti	0:00	0	0:00	0:00	
Jaunlakstigalas	23:05	70	0:31	6:24	
Jaunleiš upi	0:00	0	0:00	0:00	
Jaunmedni	0:00	0	0:00	0:00	
Jaunmasani	0:00	0	0:00	0:00	
Jaunrudzati	7:00	27	0:22	2:03	
Kalna Galvani	120:12	183	1:08	17:43	
Kalnmuiž a	4:22	31	0:12	1:23	
Kalnsetas	0:00	0	0:00	0:00	
Kalnvidi	0:00	0	0:00	0:00	
Kalnares	22:13	69	0:29	4:28	
Kalvani	0:00	0	0:00	0:00	
Kaupernieki	0:00	0	0:00	0:00	
Kaupres	114:18	247	0:49	31:23	
Kaupres 1	115:46	246	0:49	31:55	
Krasta Ozoli	29:19	83	0:34	8:54	
Krastini	68:02	135	0:41	7:09	
Kropini	0:00	0	0:00	0:00	
Kvieš i	0:00	0	0:00	0:00	
Klavas	101:54	201	0:43	23:04	
Klavini	0:00	0	0:00	0:00	
Kukas	0:00	0	0:00	0:00	
Laides	92:51	153	1:04	11:38	
Landzani	26:58	80	0:33	6:32	
Landzani 1	19:01	63	0:29	4:23	
Landzani 4	9:40	32	0:25	2:03	
Landzani 5	17:51	61	0:27	3:55	
Latvani	0:00	0	0:00	0:00	
Lauri	0:00	0	0:00	0:00	
Lazdas	0:00	0	0:00	0:00	
Leiš upi	9:14	37	0:21	3:09	
Lejas	0:00	0	0:00	0:00	
Lejas 1	0:00	0	0:00	0:00	
Lidijas	0:00	0	0:00	0:00	
Lieknas	0:00	0	0:00	0:00	
Liepsala	105:44	194	0:45	22:29	
Liciš i	18:44	52	0:28	1:14	
Licu Dzirnavas	0:00	0	0:00	0:00	

To be continued on next page...

SHADOW - Main Result

...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]	
Maurini	0:00	0	0:00	0:00	
Mazezeri	0:00	0	0:00	0:00	
Medni	0:00	0	0:00	0:00	
Meistari	6:49	28	0:22	2:00	
Mež a Muiž a	73:57	122	0:52	6:47	
Mež a Rasas	0:00	0	0:00	0:00	
Mež muiž a	74:30	135	0:44	7:20	
Mež setas	0:00	0	0:00	0:00	
Mež vidi	137:08	263	0:44	24:33	
Muiž nieki (kad. apz. 56960040061)	30:08	59	0:40	3:07	
Muiž nieki (kad. apz. 76860010011)	10:40	39	0:22	0:46	
Malkalni	0:00	0	0:00	0:00	
Masanpurvs	0:00	0	0:00	0:00	
Neretas 1	0:00	0	0:00	0:00	
Neretas 2	0:00	0	0:00	0:00	
Neretas 4	0:00	0	0:00	0:00	
Neretas 5	0:00	0	0:00	0:00	
Neretas 7	0:00	0	0:00	0:00	
Neretas 8	0:00	0	0:00	0:00	
Nomales	0:00	0	0:00	0:00	
Ogu purvs	0:00	0	0:00	0:00	
Ozoli	0:00	0	0:00	0:00	
Ozolmuiž a	0:00	0	0:00	0:00	
Ozolsalina	0:00	0	0:00	0:00	
OŠ ini (kad. apz. 76860060068001)	0:00	0	0:00	0:00	
OŠ ini (kad. apz. 76860060068006)	0:00	0	0:00	0:00	
Paegli	0:00	0	0:00	0:00	
Palejas	0:00	0	0:00	0:00	
Pilskalni	0:00	0	0:00	0:00	
Pludmales	59:43	138	0:41	15:15	
Pludmales 1	65:08	143	0:44	17:07	
Polakas	0:00	0	0:00	0:00	
Polakas 1	0:00	0	0:00	0:00	
Polakas 1	0:00	0	0:00	0:00	
Polakas 3	0:00	0	0:00	0:00	
Pumpuri	0:00	0	0:00	0:00	
Pumpuri (kad. apz. 56960040091)	0:00	0	0:00	0:00	
Pumpuri (kad. apz. 76860060095)	0:00	0	0:00	0:00	
Purvini	0:00	0	0:00	0:00	
Pucsilavas	0:00	0	0:00	0:00	
Rasas	0:00	0	0:00	0:00	
Rijasvecumi	0:00	0	0:00	0:00	
Robež nieki	0:00	0	0:00	0:00	
Rudzati	9:47	33	0:25	2:54	
Raceni	60:36	123	0:40	6:17	
Ruki	0:00	0	0:00	0:00	
Salvija	0:00	0	0:00	0:00	
Sarkani	0:00	0	0:00	0:00	
Sarmas	0:00	0	0:00	0:00	
Saulkrasti	15:42	50	0:25	1:00	
Saulites	18:43	63	0:28	4:38	
Seglini	17:29	61	0:28	4:26	
Senlici	21:55	68	0:31	6:03	
Silavinas	0:00	0	0:00	0:00	
Skola (kad. apz. 56960040345001)	66:06	136	0:43	6:30	
Skola (kad. apz. 56960040345002)	70:37	141	0:45	7:00	
Skola (kad. apz. 56960040345005)	70:42	136	0:44	6:59	
Smelceja	0:00	0	0:00	0:00	
Smelceju majas	0:00	0	0:00	0:00	
Spridiš i	35:14	67	0:42	3:14	
Spares	0:00	0	0:00	0:00	
Stacija Trepe 2	0:00	0	0:00	0:00	
Starumeni	12:23	49	0:24	1:22	

To be continued on next page...

SHADOW - Main Result

...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]	
Stepi	0:00	0	0:00	0:00	
Straumenini	41:19	98	0:34	4:02	
Strauti	63:50	127	0:42	6:21	
Strautini	32:18	78	0:30	1:50	
Suš i	46:52	74	0:43	2:33	
Sipolini	13:07	39	0:27	4:06	
Turaiki	48:15	110	0:31	5:24	
Tireli	5:42	35	0:14	1:59	
Tudalinas	32:25	86	0:33	4:09	
Tujas	0:00	0	0:00	0:00	
Upenes	0:00	0	0:00	0:00	
Uplejas (kad. apz. 56760080007)	0:00	0	0:00	0:00	
Uplejas (kad. apz. 56960040385)	63:39	129	0:42	6:20	
Upmalas	0:00	0	0:00	0:00	
Upmales	77:03	187	0:39	19:22	
Upmalnieki	18:13	43	0:32	3:03	
Upmali	78:54	179	0:54	20:29	
UpiŠ i	0:00	0	0:00	0:00	
Urbani 1	0:00	0	0:00	0:00	
Urgas	0:00	0	0:00	0:00	
Uzkalnini	0:00	0	0:00	0:00	
Vaivarini	21:17	66	0:23	7:22	
VecleiŠ upi	8:42	37	0:20	2:58	
Vecumi	0:00	0	0:00	0:00	
Vecveveri	58:53	154	0:40	18:59	
Viduslejas	12:41	42	0:24	0:50	
Vijas	0:00	0	0:00	0:00	
Vilbaude	0:00	0	0:00	0:00	
VilniŠ i	69:38	119	0:50	6:29	
Vizbuli	0:00	0	0:00	0:00	
Vizuli	0:00	0	0:00	0:00	
VuŠ karnieki	0:00	0	0:00	0:00	
Valodzes	33:16	94	0:35	8:47	
Valodzite	0:00	0	0:00	0:00	
Varkali	0:00	0	0:00	0:00	
Veji	11:22	34	0:27	2:38	
Vejini	11:04	34	0:27	2:38	
Vejkalni	49:07	121	0:32	5:33	
Vetras	0:00	0	0:00	0:00	
Veveri	63:57	126	0:39	21:35	
Veveri 1	63:38	155	0:42	20:37	
Viksnes	0:00	0	0:00	0:00	
Vipes skola 1	63:37	125	0:43	6:33	
Vipmali	209:50	263	1:23	55:29	
Zalumi	0:08	8	0:01	0:02	
Zemturi	0:00	0	0:00	0:00	
Zemites	0:00	0	0:00	0:00	
Ziedini	36:20	78	0:32	2:03	
Ziemeli	10:41	33	0:27	2:36	
Ziemeļnieki	80:33	100	1:15	26:10	
Zvirgzdini	0:00	0	0:00	0:00	
Zilites	43:14	111	0:39	12:26	
Zilusala	0:00	0	0:00	0:00	
Abeles	0:00	0	0:00	0:00	
Arsmenieki (kad. apz. 76860060006001)	0:00	0	0:00	0:00	
Arsmenieki (kad. apz. 76860060006008)	0:00	0	0:00	0:00	
ErgliŠ i	10:16	31	0:25	2:28	
Ergli	0:00	0	0:00	0:00	
Ives	18:29	63	0:28	4:07	
KirŠ i	23:12	70	0:31	5:33	
Kikaukas (kad. apz. 56960030117001)	0:00	0	0:00	0:00	
Kikaukas (kad. apz. 56960030117008)	0:00	0	0:00	0:00	
Lovani	0:00	0	0:00	0:00	

To be continued on next page...

SHADOW - Main Result

...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]	
Udensrozes	0:00	0	0:00	0:00	
Udri	47:00	100	0:40	15:49	

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

No.	Name	Worst case [h/year]	Expected [h/year]
E1	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m) (109)	44:25	7:29
E10	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	106:52	28:02
E11	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	65:06	10:35
E12	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	49:28	10:07
E13	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	516:16	78:59
E14	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	381:28	76:04
E15	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	164:31	34:47
E16	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	131:02	26:38
E2	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	0:00	0:00
E3	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	0:00	0:00
E4	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	0:00	0:00
E5	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	295:13	80:17
E6	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	41:07	6:27
E7	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	215:46	39:40
E8	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	111:14	29:41
E9	Siemens Gamesa SG 7.0-170 7000 170.0 !O! hub: 165.0 m (TOT: 250.0 m)	71:47	21:56

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.