

SHADOW - Hauptergebnis

Annahmen für Schattenwurfberechnung

Beschattungsbereich der WEA
Schatten nur relevant, wo Rotorblatt mind. 20% der Sonne verdeckt
Siehe WEA-Tabelle

Minimale relevante Sonnenhöhe über Horizont 3 °
Tage zwischen Berechnungen 1 Tag(e)
Berechnungszeitsprung 1 Minuten

Sonnenscheinwahrscheinlichkeit S (Mittlere tägliche Sonnenstunden) []
Jan Feb Mär Apr Mai Jun Jul Aug Sep Okt Nov Dez
2.06 3.05 4.05 4.62 5.29 5.77 7.10 6.10 5.35 3.97 2.33 1.87

Betriebsstunden ermittelt aus WEA in Berechnung und Windverteilung:
Militärplatz langjährig

Betriebsdauer je Sektor
N NNO ONO O OSO SSO S SSW WSW W WNW NNW Summe
48 290 1 ' 366946 623 81 110 1 ' 3192 ' 201605 282 219 8 ' 089

Startwindgeschwindigkeit: Startwindgeschw. aus Leistungskennlinie
Eine WEA wird nicht berücksichtigt, wenn sie von keinem Teil der
Rezeptorfläche aus sichtbar ist. Die Sichtbarkeitsberechnung basiert auf
den folgenden Annahmen:
Verwendete Höhenlinien: Höhenlinien: CONTOURLINE_ONLINEDATA_0.wpo (Areal-Objekt(e) verwendet in Berechnung:
Areal-Objekt (Höhen über Grund, z.B. für ORA oder Sichthindernisse (ZVI)): Rasterauflösung: 10.0 m

Alle Koordinatenangaben in:
Swiss (LV03)-CH1903 (CH/LI)

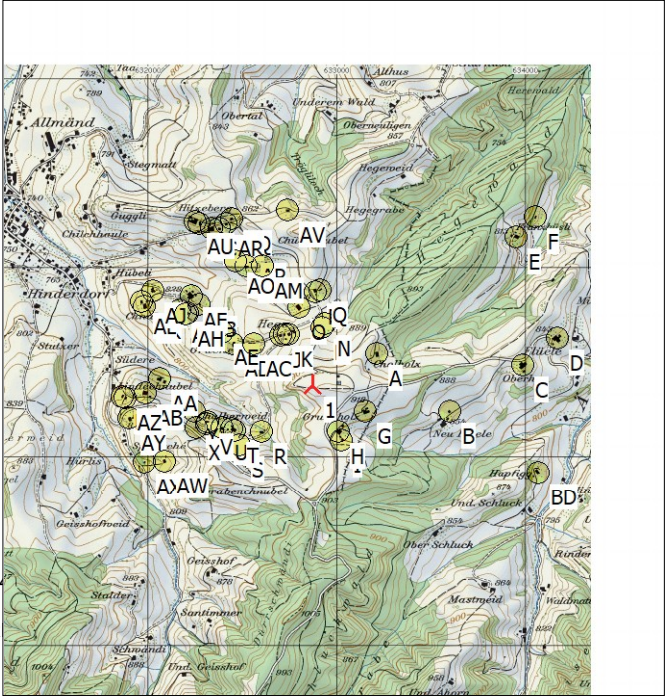
WEA

Y	X	Z	Beschreibung	WEA-Typ				Nennleistung	Rotor-durchmesser	Nabenhöhe	Schattendaten	
				Aktuell	Hersteller	Typ					Beschatt.-Bereich	U/min
[m]							[kW]	[m]	[m]	[U/min]		
1	632 ' 875213	380917.8	Gruenholz E175 135m NH	Ja	ENERCON	E-175 EP5-6	' 000	6 ' 000	175.0	135.0	1 ' 739	-

Schattenrezeptor-Eingabe

Nr.	Name	Y	X	Z	Breite	Höhe	Höhe ü.Gr.	Neigung des Fensters	Ausrichtungsmodus	Augenhöhe (ZVI) ü.Gr.
				[m]	[m]	[m]	[m]	[°]		[m]
A	Kohlholz 22	633 ' 219213	' 547881.6	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
B	Neu-Flühlen (Hofstatt)	633 ' 603213	' 241854.0	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
C	Ober-Flühlen	633 ' 991213	' 48856.3	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
D	Mittler-Flühlen	634 ' 174213	' 63036.3	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
E	Franzhüsli (Ober-Franzhüsli)	633 ' 954214	' 16306.9	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
F	Franzhüsli (Uder-Franzhüsli)	634 ' 059214	' 268790.0	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
G	Grunholz 6	633 ' 154213	' 24302.1	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
H	Grunholz 2	633 ' 013213	' 13300.0	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
I	Grunholz 4	633 ' 031213	' 09100.0	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
J	Hegen 23	632 ' 706213	' 64362.5	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
K	Hegen 26	632 ' 751213	' 64868.1	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
L	Hegen 24	632 ' 726213	' 64365.0	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
M	Hegen 32	632 ' 929213	' 68366.5	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
N	Hegen 30	632 ' 941213	' 70464.1	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
O	Hegen 33	632 ' 804213	' 78961.0	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
P	Hegen 35	632 ' 889213	' 87466.9	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
Q	Hegen 36	632 ' 918213	' 88466.8	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
R	Kalberweid 21	632 ' 604213	' 13349.9	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
S	Kalberweid 18	632 ' 490213	' 06253.2	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
T	Kalberweid 17	632 ' 461213	' 14146.3	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
U	Kalberweid 9	632 ' 396213	' 15347.6	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
V	Kalberweid 7	632 ' 322213	' 18343.6	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
W	Kalberweid 5	632 ' 317213	' 17845.5	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
X	Kalberweid 4	632 ' 262213	' 15455.0	1.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0

(Fortsetzung nächste Seite)...



Maßstab 1:40 ' 000
Neue WEA
Schattenrezeptor

SHADOW - Hauptergebnis

...(Fortsetzung von vorheriger Seite)

Nr.	Name	Y	X	Z	Breite	Höhe	Höhe ü.Gr.	Neigung des Fensters	Ausrichtungsmodus	Augenhöhe (ZVI) ü.Gr.
				[m]	[m]	[m]	[m]	[°]		[m]
	Y Kalberweid 3	632	' 250213	' 24038.4	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	Z Kalberweid 15	632	' 450213	' 14844.3	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AA Unterlinden 69	632	' 066213	' 41307.1	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AB Lindenknubel 1	631	' 989213	' 33825.9	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AC Grünenboden 22	632	' 566213	' 59850.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AD Grünenboden 20	632	' 456213	' 59342.5	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AE Grünenboden 19	632	' 399213	' 66038.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AF Winkelmatt 15	632	' 233213	' 85017.6	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AG Kuferhüsli 3	632	' 214213	' 76030.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AH Kuferhüsli 1	632	' 205213	' 75430.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AI Kuferhüsli 2	632	' 173213	' 77430.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AJ Knubel 8	632	' 031213	' 87715.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AK Knubel 12	631	' 986213	' 79713.8	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AL Knubel 10	631	' 971213	' 81910.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AM Loch 30	632	' 610214	' 00849.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AN Flühmatt 22	632	' 525214	' 00736.3	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AO Flühmatt 20	632	' 470214	' 03830.3	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AP Hübeli 28	632	' 538214	' 08347.9	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AQ Hitzenberg 27	632	' 448214	' 25853.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AR Hitzenberg 26	632	' 419214	' 23046.9	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AS Hitzenberg 18	632	' 382214	' 20837.6	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AT Hitzenberg 16	632	' 341214	' 20635.4	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AU Hitzenberg 25	632	' 256214	' 24142.9	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AV Tröglikehr 32	632	' 745214	' 30166.2	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AW Spissachen 11	632	' 092212	' 98042.5	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AX Spissachen 9	631	' 984212	' 97422.0	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AY Ahornstrasse 72	631	' 905213	' 20424.5	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	AZ Lindenschlössli 4	631	' 885213	' 31118.4	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	BA Lindenschlössli 2	631	' 868213	' 32014.3	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	BB Winkelmatt 17	632	' 277213	' 80720.9	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	BC Hitzenberg 23	632	' 278214	' 23241.4	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0
	BD Hapfig	634	' 071212	' 91823.1	1.0	1.0	1.0	90.0	"Gewächshaus-Modus"	2.0

Berechnungsergebnisse

Schattenrezeptor

		astron. max. mögl. Beschattungsdauer			met. wahrsch. Beschattungsdauer	
Nr.	Name	Stunden/Jahr	Schattentage/Jahr	Max.Schattendauer/Tag	Stunden/Jahr	
		[h/a]	[d/a]	[h/d]	[h/a]	
A	Kohlholz 22	148:47	124	1:35	42:41	
B	Neu-Flühlen (Hofstatt)	90:01	123	0:55	18:52	
C	Ober-Flühlen	21:13	46	0:36	5:24	
D	Mittler-Flühlen	14:59	38	0:30	3:59	
E	Franzhüsli (Ober-Franzhüsli)	0:00	0	0:00	0:00	
F	Franzhüsli (Under-Franzhüsli)	16:14	44	0:28	3:30	
G	Grunholz 6	39:43	46	1:06	6:46	
H	Grunholz 2	0:00	0	0:00	0:00	
I	Grunholz 4	0:00	0	0:00	0:00	
J	Hegen 23	198:07	143	1:51	26:14	
K	Hegen 26	231:51	159	1:58	32:02	
L	Hegen 24	211:40	147	1:54	28:38	
M	Hegen 32	258:39	175	1:55	47:51	
N	Hegen 30	241:59	167	1:50	44:12	
O	Hegen 33	184:15	134	1:34	24:21	
P	Hegen 35	126:40	104	1:24	17:46	
Q	Hegen 36	121:47	102	1:22	17:34	
R	Kalberweid 21	0:00	0	0:00	0:00	
S	Kalberweid 18	0:00	0	0:00	0:00	
T	Kalberweid 17	0:00	0	0:00	0:00	
U	Kalberweid 9	1:37	11	0:12	0:27	
V	Kalberweid 7	63:13	73	1:03	18:34	
W	Kalberweid 5	61:11	72	1:03	18:01	
X	Kalberweid 4	67:18	79	1:02	19:54	
Y	Kalberweid 3	100:45	108	1:03	28:22	

(Fortsetzung nächste Seite)...

SHADOW - Hauptergebnis

...(Fortsetzung von vorheriger Seite)

		astron. max. mögl. Beschattungsdauer			met. wahrsch. Beschattungsdauer
Nr.	Name	Stunden/Jahr	Schattentage/Jahr	Max.Schattendauer/Tag	Stunden/Jahr
		[h/a]	[d/a]	[h/d]	[h/a]
	Z Kalberweid 15	0:00	0	0:00	0:00
	AA Unterlinden 69	42:15	69	0:48	9:52
	AB Lindenknubel 1	38:17	66	0:45	9:33
	AC Grünenboden 22	136:17	116	1:32	19:14
	AD Grünenboden 20	96:20	97	1:17	15:36
	AE Grünenboden 19	74:35	85	1:08	11:08
	AF Winkelmatt 15	42:57	68	0:49	5:15
	AG Kuferhüsli 3	43:56	67	0:51	6:19
	AH Kuferhüsli 1	43:19	66	0:51	6:19
	AI Kuferhüsli 2	40:03	64	0:48	5:47
	AJ Knubel 8	28:41	54	0:41	3:58
	AK Knubel 12	26:58	53	0:40	4:10
	AL Knubel 10	26:02	51	0:39	3:57
	AM Loch 30	77:27	86	1:02	7:48
	AN Flühmatt 22	83:55	98	0:58	8:07
	AO Flühmatt 20	77:46	98	0:54	7:18
	AP Hübeli 28	56:01	74	0:54	5:27
	AQ Hitzenberg 27	13:47	36	0:29	1:17
	AR Hitzenberg 26	26:50	50	0:39	2:29
	AS Hitzenberg 18	39:25	64	0:44	3:36
	AT Hitzenberg 16	42:51	70	0:44	3:50
	AU Hitzenberg 25	38:27	66	0:41	3:18
	AV Tröglikehr 32	0:00	0	0:00	0:00
	AW Spissachen 11	14:20	37	0:29	4:14
	AX Spissachen 9	27:22	54	0:38	8:10
	AY Ahornstrasse 72	39:00	73	0:41	10:41
	AZ Lindenschlössli 4	30:53	60	0:40	7:49
	BA Lindenschlössli 2	29:33	57	0:40	7:25
	BB Winkelmatt 17	48:29	71	0:53	6:08
	BC Hitzenberg 23	39:30	68	0:42	3:26
	BD Hapfig	0:00	0	0:00	0:00

Gesamtdauer Beschattung an Rezeptoren pro WEA

Nr.	Name	Maximal	Erwartet
		[h/a]	[h/a]
1	Gruenholz E175 135m NH	1455:33	256:29

Summen in Rezeptortabelle und WEA-Tabelle können sich unterscheiden, da eine WEA gleichzeitig an zwei oder mehr Rezeptoren Beschattung verursachen kann und/oder ein Rezeptor gleichzeitig von zwei oder mehr WEA beschattet werden kann.

Projekt:

Eriswil 5(2b)

Lizenzierter Anwender:

WindMess GmbH

Bahnhofstr. 42

CH-6162 Entlebuch

+41 41 480 32 86

Corinne Fischer / info@windpower.ch

Berechnet:

16.09.2024 11:36/3.6.377

SHADOW - Kalender pro WEA

WEA: 1 - Gruenholz E175 135m NH

Annahmen für Schattenwurfberechnung

Sonnenscheinwahrscheinlichkeit S (Mittlere tägliche Sonnenstunden) []

Jan	Feb	Mär	Apr	Mai	Jun	Jul	Aug	Sep	Okt	Nov	Dez
2.06	3.05	4.05	4.62	5.29	5.77	7.10	6.10	5.35	3.97	2.33	1.87

Betriebsdauer je Sektor

N	NNO	ONO	O	OSO	SSO	S	SSW	WSW	W	WNW	NNW	Summe						
48	290	1	'	366	946	623	81	110	1	'	3192	'	201605	282	219	8	'	089

Startwindgeschwindigkeit: Startwindgeschw. aus Leistungskennlinie

	Januar	Februar	März	April	Mai	Juni
1	08:15 09:38-13:46/248 16:50	07:55 10:10-14:14/244 17:30 16:09-16:35/26	07:11 08:13-12:16/243 15:52-16:53/61 18:13 12:23-14:13/110	07:10 09:20-11:04/104 18:34-19:09/35 19:57 11:19-11:35/16 16:33-18:02/89	06:15 07:12-08:32/80 20:38 18:52-19:40/48	05:38 06:37-08:13/96 21:16 18:55-19:40/45
2	08:15 09:38-13:47/249 16:51	07:54 10:11-14:15/244 17:32 16:09-16:36/27	07:09 08:13-12:16/243 15:50-16:55/65 18:15 12:23-14:12/109	07:08 09:21-11:02/101 18:34-19:08/34 19:59 08:18-08:35/17 16:33-18:01/88	06:13 07:11-08:29/78 20:40 18:51-19:40/49	05:38 06:36-08:12/96 21:17 18:55-19:42/47
3	08:15 09:38-13:47/249 16:51	07:53 10:13-14:16/243 16:09-16:37/28 17:33 09:15-09:16/1	07:07 08:12-12:15/243 15:48-16:56/68 18:16 12:24-14:11/107	07:06 09:21-11:00/99 18:34-19:07/33 20:00 08:15-08:38/23 16:34-18:00/86	06:12 07:12-08:28/75 20:41 18:50-19:40/50	05:37 06:36-08:13/97 21:18 18:56-19:45/49
4	08:15 09:39-13:48/249 16:53	07:52 10:14-14:16/242 16:09-16:36/27 17:35 09:07-09:23/16	07:05 08:12-12:15/243 15:46-16:57/71 18:18 12:25-14:10/105	07:04 09:21-10:58/97 18:34-19:09/32 20:01 08:12-08:40/28 16:35-18:00/85	06:10 07:11-08:24/73 20:43 18:50-19:41/51	05:36 06:35-08:12/97 21:18 18:56-19:46/50
5	08:15 09:39-13:49/250 16:54	07:50 10:14-14:17/243 16:09-16:37/28 17:36 09:05-09:27/22	07:03 08:12-12:14/242 15:44-16:58/74 18:19 12:26-14:09/103	07:02 09:22-10:56/94 18:35-19:05/30 20:03 08:10-08:42/32 16:35-17:59/84	06:09 07:11-08:10/59 18:50-19:41/51 20:44 08:16-08:18/2	05:36 06:36-08:13/97 21:19 18:57-19:49/52
6	08:15 09:40-13:50/250 16:55	07:49 09:02-09:28/26 16:09-16:37/28 17:38 10:12-14:16/244	07:01 08:12-12:13/241 15:43-16:59/76 18:20 12:27-14:08/101	07:00 09:23-10:54/91 18:36-19:04/28 20:04 08:08-08:43/35 16:36-17:58/82	06:07 07:11-08:08/57 20:45 18:49-19:41/52	05:35 06:36-08:13/97 21:20 18:57-19:50/53
7	08:15 09:40-13:51/251 16:56	07:47 09:01-09:31/30 16:10-16:37/27 17:40 10:11-14:17/246	07:00 08:12-12:12/240 15:42-17:00/78 18:22 12:28-14:06/98	06:58 09:24-10:52/88 18:37-19:02/25 20:05 07:56-08:44/48 16:37-17:57/80	06:06 07:11-08:06/55 20:47 18:48-19:42/54	05:35 06:34-08:13/99 21:21 18:58-19:51/53
8	08:14 09:41-13:52/251 16:57	07:46 08:59-09:32/33 16:10-16:36/26 17:41 10:10-14:17/247	06:56 08:13-12:11/238 15:40-17:01/81 18:23 12:29-14:05/96	06:56 07:51-08:44/53 18:38-19:00/22 20:07 09:24-10:49/85 16:38-17:56/78	06:04 07:10-08:06/56 20:48 18:48-19:42/54	05:35 06:34-08:13/99 21:22 18:58-19:51/53
9	08:14 09:42-13:54/252 16:58	07:45 08:58-09:34/36 16:11-16:37/26 17:43 10:10-14:18/248	06:56 08:13-12:11/238 15:39-17:02/83 18:25 12:32-14:05/93	06:54 07:48-08:45/57 18:40-18:58/18 20:08 09:26-10:47/81 16:39-17:55/76	06:03 07:11-08:07/56 20:49 18:48-19:42/54	05:34 06:33-08:14/101 21:22 18:58-19:54/56
10	08:14 09:42-13:54/252 16:59	07:43 08:44-09:35/51 16:11-16:36/25 17:44 10:08-14:18/250	06:54 08:14-12:10/236 15:39-17:03/84 18:26 12:33-14:03/90	06:53 07:45-08:45/60 18:42-18:54/12 20:10 09:27-10:44/77 16:40-17:53/73	06:01 07:11-08:08/57 20:50 18:48-19:42/54	05:34 06:32-08:13/101 21:23 18:57-19:54/57
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17	08:10 09:49-14:02/253 17:08	07:32 08:33-09:40/67 17:55 10:03-14:19/256	06:40 08:23-11:58/215 17:27-17:56/29 18:36 13:01-13:42/41 15:33-17:06/93	06:39 07:35-08:45/70 20:19 16:50-17:43/53	05:52 06:57-08:10/73 20:59 18:48-19:42/54	05:33 06:32-08:14/102 21:27 18:55-20:00/65
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27	08:01 10:06-14:11/245 17:23	07:15 08:15-12:17/242 15:57-16:50/53 18:10 12:22-14:15/113	06:20 08:20-11:18/178 15:31-17:05/94 18:50 17:29-18:09/40	06:22 07:15-08:38/83 20:33 18:57-19:36/39	05:42 06:43-08:12/89 21:11 18:52-19:40/48	05:35 06:34-08:16/102 21:29 18:57-02/01/64
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Sonnenscheinstunden						475
Anzahl Minuten mit Schatten						4817

Tabellen-Layout: Die Daten für jeden Tag sind in folgender Matrix wiedergegeben (Sommerzeit wie Bezugsjahr):

Tag im Monat	Sonnenaufgang (SS:MM)	Zeitpunkt (SS:MM)	Schattenanfang-Zeitpunkt (SS:MM)	Schattenende/Minuten mit Schatten
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM)	Schattenanfang-Zeitpunkt (SS:MM)	Schattenende/Minuten mit Schatten

Projekt:

Eriswil 5(2b)

Lizenzierter Anwender:

WindMess GmbH

Bahnhofstr. 42

CH-6162 Entlebuch

+41 41 480 32 86

Corinne Fischer / info@windpower.ch

Berechnet:

16.09.2024 11:36/3.6.377

SHADOW - Kalender pro WEA

WEA: 1 - Gruenholz E175 135m NH

Annahmen für Schattenwurfberechnung

Sonnenscheinwahrscheinlichkeit S (Mittlere tägliche Sonnenstunden) []

Jan	Feb	Mär	Apr	Mai	Jun	Jul	Aug	Sep	Okt	Nov	Dez
2.06	3.05	4.05	4.62	5.29	5.77	7.10	6.10	5.35	3.97	2.33	1.87

Betriebsdauer je Sektor

N	NNO	ONO	O	OSO	SSO	S	SSW	WSW	W	WNW	NNW	Summe
48	290	1	'	366	946	623	81	110	1	'	3192	'
201605 282 219 8 ' 089												

Startwindgeschwindigkeit: Startwindgeschw. aus Leistungskennlinie

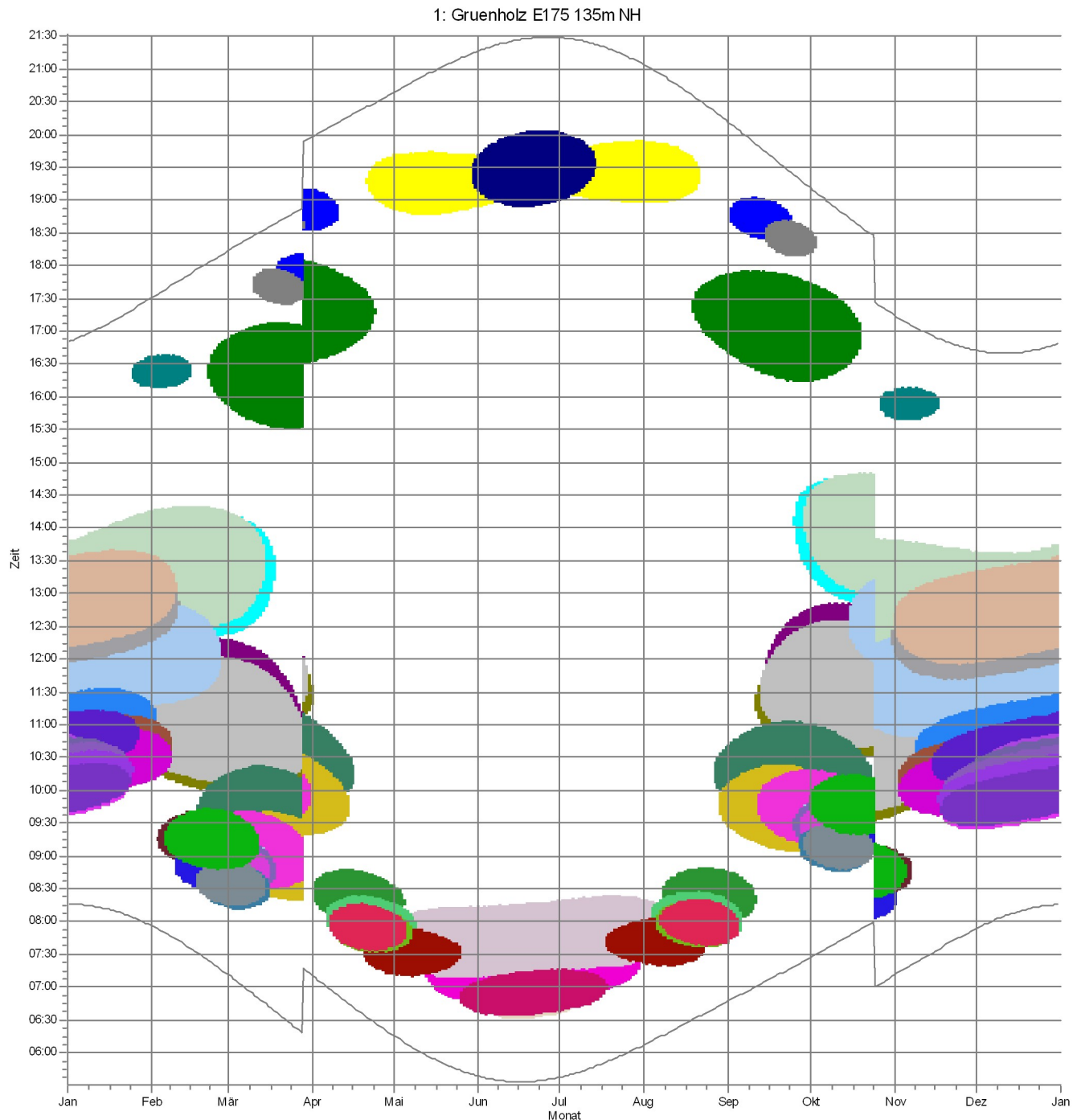
	[Juli]	[August]	[September]	[Oktober]	[November]	[Dezember]
1	05:37 06:36-08:17/101	06:07 07:22-08:19/57	06:47 07:41-08:44/63	07:26 08:54-12:45/231	07:10 08:15-09:04/49	07:53 09:26-13:38/252
	21:28 19:00-20:00/60	21:03 18:58-19:53/55	20:11 09:27-10:40/73	19:11 13:18-14:37/79	17:14 09:38-13:48/250	16:42 09:25-13:37/252
2	05:38 06:37-08:18/101	06:08 07:21-08:18/57	06:48 07:44-08:44/60	07:28 08:52-12:46/234	07:12 08:28-09:03/55	16:42 09:25-13:37/252
	21:28 19:01-20:00/59	21:02 18:59-19:52/54	20:09 09:26-10:43/77	19:09 13:14-14:38/84	17:13 09:39-13:48/249	16:42 09:25-13:37/252
3	05:38 06:38-08:19/101	06:09 07:22-08:17/55	06:50 07:46-08:43/57	07:29 08:52-12:47/235	07:13 08:29-09:01/32	16:41 09:25-13:36/251
	21:28 19:02-19:59/57	21:00 18:58-19:52/54	20:07 09:24-10:45/81	19:07 13:12-14:40/88	17:11 09:45-13:47/247	16:41 09:25-13:36/251
4	05:39 06:39-08:18/99	06:11 07:21-08:17/56	06:51 07:48-08:42/54	07:31 08:50-12:48/238	07:15 08:31-09:00/29	16:40 09:25-13:36/249
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	21:15 19:00-19:52/52	20:29 17:04-17:40/36	19:29 18:10-18:50/40	18:31 16:38-17:11/33	16:48 15:48-16:01/13	16:41 09:25-13:36/249
23	05:56 07:03-08:22/79	06:35 07:32-08:48/76	07:16 09:05-12:32/207	07:57 08:58-10:21/83	07:43 09:28-13:40/252	16:41 09:25-13:36/249
	21:14 19:00-19:52/52	20:28 17:00-17:42/42	19:27 18:09-18:47/38	18:29 16:32-16:49/257	16:47 15:48-16:01/13	16:41 09:25-13:36/249
24	05:57 07:04-08:21/77	06:36 07:37-08:48/71	07:17 09:05-12:35/210	07:59 09:02-10:10/68	07:44 09:27-13:40/253	16:41 09:25-13:36/249
	21:13 18:59-19:52/53	20:26 16:57-17:43/46	19:25 18:10-18:44/34	18:27 16:32-16:49/257	16:47 15:48-16:01/13	16:41 09:25-13:36/249
25	05:59 07:05-08:21/76	06:38 07:38-08:48/70	07:18 09:05-12:37/212	07:00 08:03-09:10/67	07:45 09:26-13:39/253	16:41 09:25-13:36/249
	21:12 18:59-19:52/53	20:24 16:55-17:45/50	19:23 14:03-14:09/6	17:26 09:33-13:49/256	16:46 15:48-16:01/13	16:41 09:25-13:36/249
26	06:00 07:07-08:21/74	06:39 07:38-08:48/70	07:20 09:05-12:38/213	07:02 08:04-09:09/65	07:47 09:26-13:39/253	16:41 09:25-13:36/249
	21:11 18:59-19:52/53	20:22 16:53-17:46/53	19:21 13:46-14:22/36	17:24 09:34-13:49/255	16:45 15:48-16:01/13	16:41 09:25-13:36/249
27	06:01 07:08-08:21/73	06:40 07:39-08:47/69	07:21 09:05-12:41/215	07:03 08:05-09:08/63	07:48 09:25-13:39/254	16:41 09:25-13:36/249
	21:09 18:58-19:52/54	20:20 10:07-10:24/17	19:19 13:38-14:28/50	17:22 09:34-13:48/254	16:44 15:48-16:01/13	16:41 09:25-13:36/249
28	06:02 07:11-08:21/70	06:42 07:38-08:47/69	07:22 09:01-12:42/221	07:05 08:06-09:08/62	07:49 09:26-13:39/253	16:41 09:25-13:36/249
	21:08 18:58-19:52/54	20:18 10:02-10:29/27	19:17 13:31-14:31/60	17:21 09:35-13:49/254	16:44 15:48-16:01/13	16:41 09:25-13:36/249
29	06:03 07:13-08:21/68	06:43 07:39-08:47/68	07:24 08:58-12:43/225	07:06 08:07-09:07/60	07:51 09:25-13:38/253	16:41 09:25-13:36/249
	21:07 18:59-19:53/54	20:16 09:38-09:56/18	19:15 13:26-14:33/67	17:19 09:35-13:48/253	16:43 15:48-16:01/13	16:41 09:25-13:36/249
30	06:04 07:17-08:20/63	06:44 07:40-08:46/66	07:25 08:56-12:45/228	07:08 08:09-09:06/57	07:52 09:25-13:37/252	16:41 09:25-13:36/249
	21:06 18:58-19:53/55	20:15 09:33-10:36/63	19:13 13:22-14:36/74	17:17 09:36-13:48/252	16:43 15:48-16:01/13	16:41 09:25-13:36/249
31	06:06 07:23-08:19/56	06:46 07:40-08:45/65	07:27 09:02-12:46/230	07:09 08:11-09:05/54	16:43 15:48-16:01/13	16:41 09:25-13:36/249
	21:04 18:58-19:53/55	20:13 09:30-10:38/68	19:13 13:22-14:36/74	17:16 09:37-13:47/250	16:43 15:48-16:01/13	16:41 09:25-13:36/249
Sonnenscheinstunden		480	441	378	11832	8035
Anzahl Minuten mit Schatten		4283	3971	8995	282	7677

Tabellen-Layout: Die Daten für jeden Tag sind in folgender Matrix wiedergegeben (Sommerzeit wie Bezugsjahr):

Tag im Monat	Sonnenaufgang (SS:MM)	Zeitpunkt (SS:MM)	Schattenanfang-Zeitpunkt (SS:MM)	Schattenende/Minuten mit Schatten
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM)	Schattenanfang-Zeitpunkt (SS:MM)	Schattenende/Minuten mit Schatten

SHADOW - Grafischer Kalender pro WEA

WEA: 1 - Gruenholz E175 135m NH



Schattenrezeptoren

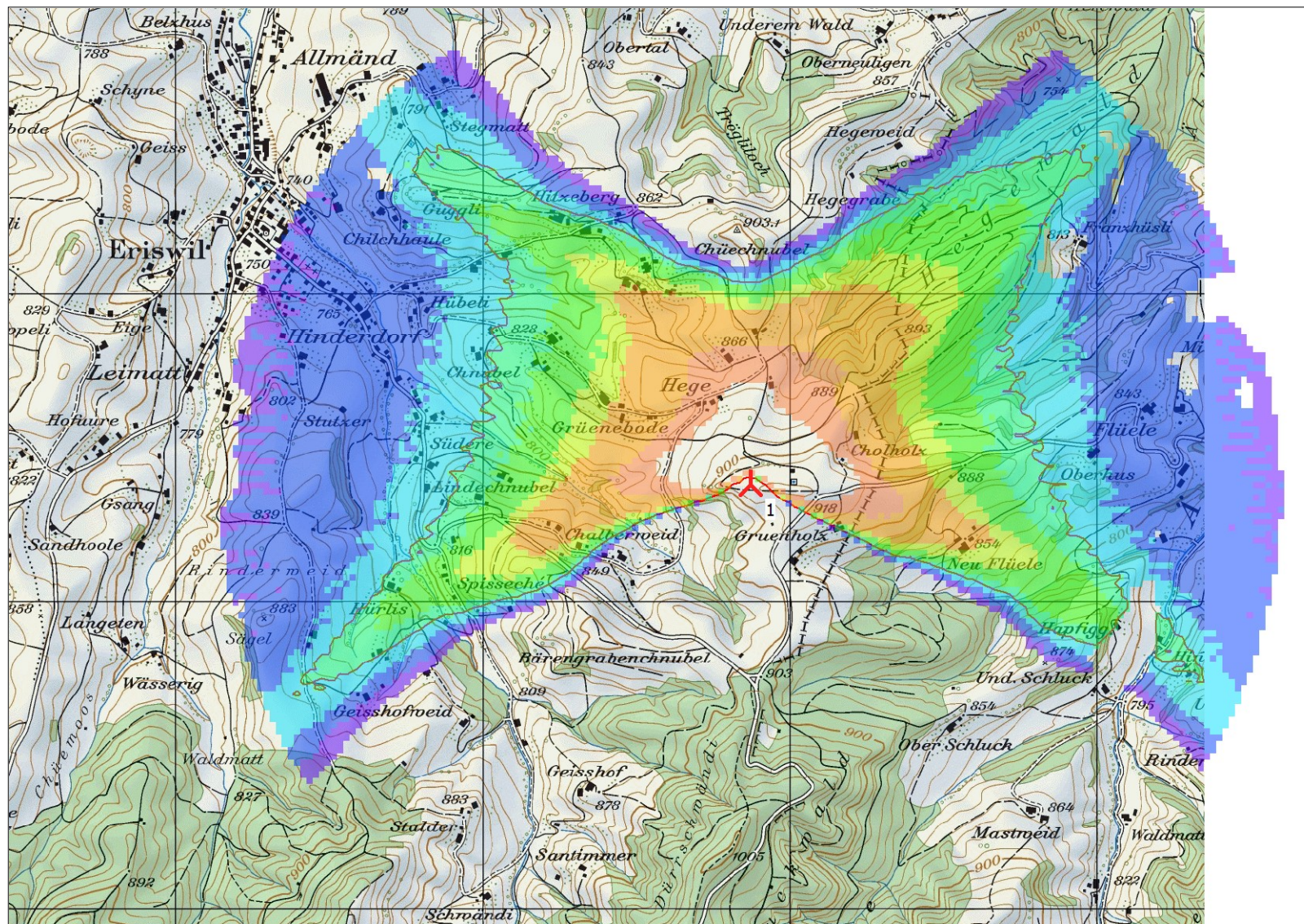
A: Kohlholz 22
B: Neu-Flühlen (Hofstatt)
C: Ober-Flühlen
D: Mittler-Flühlen
F: Franzhüsi (Uder-Franzhüsi)
G: Gruenholz 6
J: Hegen 23
K: Hegen 26
L: Hegen 24
M: Hegen 32

N: Hegen 30
O: Hegen 33
P: Hegen 35
Q: Hegen 36
U: Kalberweid 9
V: Kalberweid 7
W: Kalberweid 5
X: Kalberweid 4
Y: Kalberweid 3
AA: Unterlinden 69

AB: Lindenkubel 1
AC: Grünboden 22
AD: Grünboden 20
AE: Grünboden 19
AF: Winkelmatt 15
AG: Kuferhüsi 3
AH: Kuferhüsi 1
AI: Kuferhüsi 2
AJ: Knubel 8
AK: Knubel 12

AL: Knubel 10
AM: Loch 30
AN: Flühmatt 22
AO: Flühmatt 20
AP: Hübeli 28
AQ: Hitzenberg 27
AR: Hitzenberg 26
AS: Hitzenberg 18
AT: Hitzenberg 16
AU: Hitzenberg 25

AW: Spissachen 11
AX: Spissachen 9
AY: Ahornstrasse 72
AZ: Lindenschlössli 4
BA: Lindenschlössli 2
BB: Winkelmatt 17
BC: Hitzenberg 23



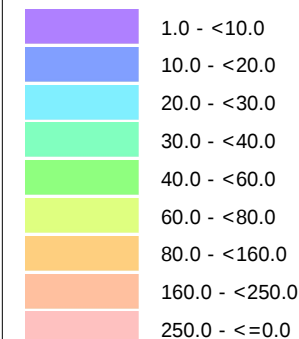
Projekt:

Eriswil 5(2b)

Stunden/Jahr,
Astron.max.mögl.

— 30

Stunden/Jahr,
Astron.max.mögl.



SHADOW -
Karte

Lizenzierter Anwender:

WindMess GmbH
Bahnhofstr. 42
CH-6162 Entlebuch
+41 41 480 32 86

Corinne Fischer / info@windpower.ch

Berechnet:

16.09.2024 11:36/3.6.377

Neue WEA

Karte: Eriswil, Maßstab 1:20'000, Mitte: Swiss (LV03)-CH1903 (CH/LI) Ost: 632'620 Nord: 213'480

Höhe der Schattenkarte: Höhenlinien: CONTOURLINE_ONLINEDATA_0.wpo (4)

Zeitschritt: 5 Minuten, Schrittweite: 7 Tag(e), Kartenaufösung: 20 m, Sichtbarkeit Auflösung: 0 m, Augenhöhe: 1.5 m